

SYNOPSIS MEDICINÆ.
A *7th Le*
COMPENDIUM
OF
Physick, Chirurgery, and Anatomy.

In IV. Books.

Shewing the Signs, Causes, Judgments, and various ways of
Curing all Diseases whether *External* or *Internal*, hap-
ping to the Bodies of humane kind.

Perform'd *Astrologically, Galenically, and Chymically.*

ILLUSTRATED

With Celestial Observations; the Judgments of Urines and
Pulses; the Presages of Hippocrates from the Body of the
Sick; the Manner of performing of all kinds of Chirur-
gick Operations: The ART of Embalming of dead Bodies,
both Ancient and Modern: The Chirurgian's Chest, fitted
both for *Sea* and *Land*: The Explication and Use of all
sorts of Chirurgick Instruments, with their various Fi-
gures; The Cure of all manner of *Tumors, Wounds, Ulcers,*
Fractures & Dislocations: With many other things of Ex-
cellent Use; And a Compleat Anatomical IDEA, of the
whole Body of Man.

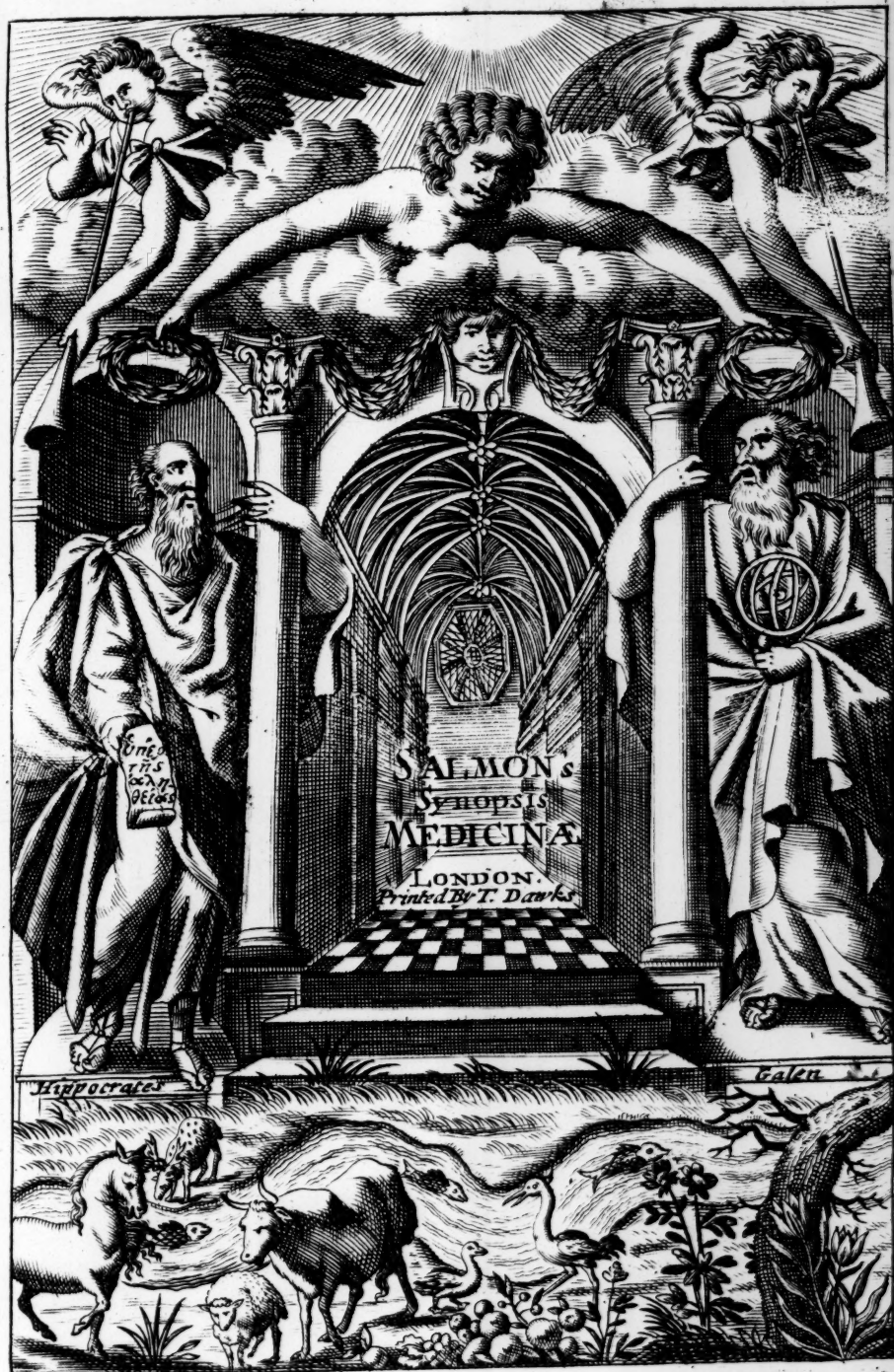
The Second Edition.

*Enlarged with above Two Thousand several Additions through the
whole Work; and Adorn'd with 24 Copper plates or Sculptures.*

By WILLIAM SALMON, Professor of Physick.

LONDON, Printed for Th. Danks, in Thames-street, next
Puddle-dock-stairs. Sold by L. Curtiss on Ludgate hill, and by
the Booksellers of London and Westminster. 1681.





Quisquis enim nōsse quid supra Vulgum debebit, statim non naturā modò, verū etiam primis doctrinarum rudimentis; multū cæteris præstet oportet. Idem ubi jam adoleverit, veritatis insano quodam teneatur amore, veluti afflatus; tū sine ullā diei, noctisve intermissione properare, ac contendere, ea quæ à clarissimis veterum tradita sunt, discere: eadēque ubi didicerit, judicare: multoque tempore explorare, ac considerare, quæ rebus sensui parentibus consentiant, quæque rursus iisdem dissentiant: ac sic illa quidem suscipere, hæc respuere. Atque huic quidem admodum utiles fore libellos nostros spero, (erunt autem hujus generis omnino pauci:) reliquis opus hoc perinde fore superfluum, ac si quis Agno fabulam narret, &c.

For whosoever would know any thing above the Vulgar sort, he must in the first place excell others not only in Nature, but in the first Rudiments of Doctrine. And when he is grown up he must be inspired (as it were) with a Vehement and furious love of Truth: Also to make hast without intermission day and night, and to use all his Endeavors to learn such things, as have been by the most famous ancient Authors delivered in writing, and when he has learnt them, to judg of them, and for a long time to search and Examine, what is agreeable to such things as are manifest by sense, and what is disagreeable, so as to chuse the former, & reject the later: And to such a man as this my Books will be I hope useful (but there will be very few such men found: as for others, this work of mine will be so as little purpose as to tell a story to an Ass.

ADVERTISEMENT.

BESIDES the Copper Plates in the Frontispiece, there are,
 I. The XV Tables of Chirurgick Instruments and Operations, at the end of the first Volumn.
 II. The VIII. Tables of Anatomick Dissections are in the Second Volumn, thus plac'd:

Tab. I. pag. 954.	} {	Tab V. pag. 1002.
Tab. II. pag. 966.		Tab. VI. pag. 1004.
Tab. III. pag. 976.		Tab. VII. pag. 1022.
Tab. IV. pag. 1000		Tab. VIII. pag. 1089

THE PREFACE.

I. **T**His is the Second Time that we publish to the World this our **SYNOPSIS MEDICINÆ**, enlarged with the Addition of above Two Thousand useful and very choice Things. We presume not hereby to teach the Learned; but it may serve as an Index to help the Memories of such as love Industry: and, without contempt, may stand the most refined Wits in some stead.

II. The Additions are made throughout the whole Work, to almost every Book, Chapter, Section and Paragraph: wherein as we have supplied Defects, so we have cut off many Superfluities, wheresoever they did occur; and made such other Alterations, as might make all the Parts of this Work harmoniously to agree, and Answer both our intended Brevity, and the truth of the matter.

III. Besides all which, we have added one whole Book, viz. an Anatomical Idea of the whole humane Frame, representing to the Intellect, the compleat and absolute Structure of Man's Body throughout all its parts. Moreover we have divulged several New Opinions of our own here and there: upon which (altho' we have not very largely discoursed, by reason of our intended Brevity, and stinted Scantling of Paper) we shall hereafter make such Dilucidations, as may make them to appear more than probable. However (for all that I know) they may stand as fair, or fairer, for Truth, than many Thousands of other Opinions universally embraced, without any Question of their Veracity, or the least suspicion of their Incongruity to real Principles.

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IV. *Some of these New Opinions are,* 1. *Our Judgments of Diseases from the Directions and Transits of the Radix,* in lib. 1. cap. 29, 30, 31, 32, 33, 34, & 35. in lib. 2. cap. 17, 18, 19, 20, 21, & 23. & lib. 3. cap. 11. & 12. 2. *Our Reasons against Blood Letting, delivered in 14. Propositions,* in lib. 3. cap. 15. sect. 3. ad 16. *tho' in this thing the Opinions of many learned men agree.* 3. *Our new Description or form of the Chyrurgians Chest, mentioned,* lib. 3. cap. 21. Sect. 191. & 192. *The singular usefulness of which Contrivance cannot so well be understood, as in the practtial use thereof.* 4. *Our Opinion as to the Order of Diet in the Cure of Diseases, but especially in the Gout, mentioned in* lib. 3. cap. 32. Sect. 8. §. 21. *the reason of which, ought principally to be considered in a Lepressy, Atrophy, &c.* 5. *Our new Hypothesis of Feavers,* in lib. 3. cap. 33. Sect. 1. *The causes of which we take to be the Various Contests of Hetrogene or differing Salts, arising from other preternatural Antecedent Causes either external or internal; from the reasons of which Causes we have in part instituted the Method of Cure in each kind of Fever.* 6. *Our opinion of the Plague, in* lib. 3. cap. 33. Sect. 21. §. 2 & 3. *That it cannot subsist without a Fever, in opposition to the learned Barber.* 7. *Our Opinions of the Pulse-Prognosticks, in* lib. 2. cap. 33. *and of the Cause of the Pulse beating, laid down in* lib. 4. cap. 4. Sect. 1. §. 7. *wherin we have differed from the Sense of all other Men.* 8. *Our Opinion of the true Cause of the Gout, in* lib. 4. cap. 5. Sect. 1. §. 13. *which compared with what we have said thereof, in* lib. 1. cap. 53. Sect. 8. *towards the latter end, may shew the true reason of Nodes, Chalky and stony-hardnesses, &c.* 9. *Our Opinion of the Quality in which a Muscle stands as being a simular part, in* lib. 4. cap. 6. Sect. 1, §. 20. *wherein we suppose a Reason great enough is offered.* 10. *Our Opinion of the Generation of the Gall, and its non-separation from the Blood, in* lib. 4. cap. 8. sect. 10. §. 14, 15, 16, 17, to 25. 11. *Our Opinion of the Cause of the Jaundice, in* lib. 4. c. 8. Sect. 10. §. 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36. *wherein we differ both fr. m. the Antients and Ne-*
otoricks;

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otericks, as Galen, Sylvius de le Boe, Willis, &c. These, with many more too tedious here to be enumerated are here and there scattered up and down the work; and many others also (not yet publish'd) we shall hereafter in some other work propose; all which (in their order) we offer to the Consideration of the Lovers of Truth, who can without partiality, or prejudice to our Person, seriously weigh or measure them by the Balance or Standard of the Sanctuary; Or, either approve or disapprove of them, according to the probability of the Arguments assumed, or Reasons enforcing the same.

V. We have considered the subject matter of this work in a two fold respect, viz. in an Astral and Physical: wherein we have labored to unfold the principal secrets thereof, under both Notions, in both General and Special Terms; That so by a plain and perspicuous Method we might make the matter intelligible to a very mean understanding, and fit it for ordinary use in Practice. For which cause we thought good to proceed by a gradual Course, to lead the young and industrious Artist (as it were) by the hand, through its abstruse Mysteries; and so at last to furnish him with such a clear and currant Knowledge, as might sufficiently enable him, to perform any thing intended thereby.

VI. This work will speak for it self; and the practise and experience thereof will evince (more than many words) its exceeding usefulness to the World: and in particular the excellency of Uranical Conclusions. Physical Precepts more dubiously inform the Mind, deriving their chief Judgments from Our more exteriour Senses: which as they are either clear or cloudy, make a Judgment accordingly; from a deceiv'd Sense, an erroneous Judgment: but the Uranical Precepts are more subtil, and pure as Heaven it self, from whom they are deriv'd: and so by a most harmonious Concatination of Intelligences more divinely inform the Spiritual and Intellectual part of man: thereby furnishing him with such deep and profound Mysteries, as otherwise would never be infus'd into him. And therefore so
much

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much as spiritual and heavenly things exceed natural and Earthly, so much do the Uranicks exceed the Physicks.

VII. But many are the Objections which are daily raised by Envious minds to spot and blemish the Lustre and Splendor of Divine Urania, to make her Truths seem odious, her Children Bastards, and her self not the Legitimate Off-spring of the Excellent MNEMOSYNE: Hard measure to be so met; but so much the easier to be born, as she is fairer than the rest of her sisters: no wonder then that she is so distastful, that she casts such a frown, will not admit into her more secret Closet, the Favorers of wanton pleasures, or such as have set their Love and Affections upon things below her.

VIII. How is it then, That those who would be accounted Sons of Wisdom, and yet never saw so much as her outward form, much less her innate Beauty, her hidden life, her precious Treasures, the Habitation of her Delight, her secret Mysteries. (sealed from all who are Children of a strange Mother;) and yet should be so bold, as not only to enveigh against her Glory, speak evil of her dignity, blemish her honour, asperse her divine Name with words of Infamy, slander her with opprobrious terms and speeches; but also seek to root out and destroy her very Memory from off the face of the Earth. But to proceed,

IX. In these our Uranical Disquisitions, that part which handles diseases Radically, was never yet, to Our Knowledge, treated of before in any Language: We are the first that have adventured to publish any thing of that nature to the world. We will not much praise it (in time it may be mended) for it was writ without Precedent, and therefore, may not only be defective in part, but also immethodical in the Composure. Yet this we say (hoping for the Candid Censure of the Learned) that therein we have laid the Ground-work for ensuing Ages to build a Glorious structure of Truth upon.

X. In this Work we have not only given you the signs, Causes, Judgments and various wayes of curing all Diseases incident to humane Bodies, whether External or Internal; but we have

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we also shew'd how to perform all manner of Chyrurgick Operations, together with the Explication and Uses of all such Instruments requisite for the same. We have also given a Manifest of the Art of Embalming of Dead bodies, both according to the Ancient and Modern ways, whether Egyptian or others; To which we have added a Method of our own, which with great Facility and Success we have practis'd upon the Dead, to the infinite Satisfaction of the Living. We have also represented the Chyrurgians Chest, whose disposition was order'd by the best of that profession, both Galenick and Chymick; and that according to both vulgar and particular ways of Prescription: with a new Moddle, form'd from Experience, Reason, and Necessity, and made servicable to the Military Chyrurgian, whether by Sea or Land.

XI. In the particular Method of Curing Diseases (in lib. III.) We have not nam'd or propos'd any Medicine of publick use, but what we have divulg'd; either in Our London Dispensatory lately Publish'd; Or in this present Work; Or in Our Doron, now in the Press and suddenly to be made Publick wherein we have shew'd the Composition (if compounded) Preparation, Vertues, Use, and Dose, of every such individual Medicament: all which are to be sought out in their respective places in the said Works, where they are particularly treated of. But it is not to be suppos'd, That we should propose all the singular things which are eminent against each Disease: No, that is a Work too great for this our design'd brevity. It requires the farther diligence of the industrious Student, whose Care in this kind, may prove a double recompence for all his Labor. However in some of Our Works hereafter to be Publish'd, we shall do Our endeavour to satisfy the desires of all that are curious in that kind.

XII. If (Reader) thou findest any Error to be Essential, we here profess it was never intentional; and therefore as we think the fault to be Venial, so we intreat all the Lovers of Learning either in silence to pass it by, or else candidly to Discover the same to the Author, who will be more pleas'd to own

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and amend it, than any can possibly be in finding it out. As for the Literal and other Typographical Errors they are not many, yet we fear many more than we have taken notice of; it is scarcely to be imagined how great a multitude of Faults are committed in that kind, notwithstanding all the Care and Dilligence of double Reading, Correcting, and Revising, each individual sheet: 'Tis very well known, That men of that Profession let nothing pass their Hands, unless it first bears an Impression of their own Faults also.

XIII. Concerning this Work, we doubt not but we shall have the various Censures of many. If it please, it is that we sought for; and it shall be Our great endeavor, not only to enlarge Ourself hereafter, but to answer the farther Expectation of all those generous Souls, who (although they may find enough to be blamed yet) with a covering of Love, strive to hide our Imperfections. If it displease (as it easily may some Goose-quill Doctors, Bill-Doctors, or Knackey-Doctors, as one lately, and very elegantly termed them) we value it not; for we know nothing but envy can speak ought against our intent. To such Spirits it is not that we address it; their evil Words cannot touch us, in the end they may harm themselves, and be a witness against them, that their poisonous Malice ever sought the hurt of the most innocent and blameless: And that a matter of Error was never the point against which they levelled their Spight, but the Truth it self, from the Consciousness of their own inabilities (who performing nothing at all) hate that any else should out-do them.

XIV. I have formerly promised the Proceſs of the Universal Medicine of Paracelsus, as it was taken from an Original Manuscript, which I received from a very Worthy and Venerable man, a person of great Learning, Integrity, and Virtue, replenished with Innocency, Honour, and Piety; and I designed to have faithfully exposed it, naked to the World, as I received it, without any Cloud or Disguise, but the unworthiness of some now living has prevented me. It was the Advice of him whose Words were all Oracles, Cast not your Pearls before Swine; it

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is not fit to give the Childrens Bread to Dogs: And truly Swine and Dogs are many of those with whom we have to do: if we ought to beware of men, how much more of such as are the worst of Beasts?

XV. There is a Generation of men in the World (but they can scarcely be called men) who are very Valiant to fight with a Man behind his Back, and in his absense can beat him to Dirt, if ill language, lying accusations, scandalous aspersions, unmannerly boasting, or modish Cowardise would do it; with such we desire to have no converse. These are they that can judge a man by Report, condemn him without Evidence, and privately assassine his Credit and Reputation without cause, whom they either never yet saw, or have not seen without many advantages to themselves. They represent him to all disadvantages, and make their Reports of him, according to those little idle Ideas, which they fancy to themselves in their dwarfish Conceits: from such we have all that can be expected; viz. fained and invented stories, impertinent babble, abuse and clamour; for they have no Honesty left to prostitute, nor Civility to exercise: And generally the invented and forged Stories and lying Defamations with which such as they brand others, are the premeditated, ill managed, and abominable Villanies of their own Lives; which none can look into without Horror, think of without Shame, or report without great Impudency.

XVI. It would be too long to recriminate all we know of these kind of Animals; or to make a particular Answer to all their impudent, scandalous, impertinent, forged and lying assertions, prostituted to the Vulgar by these inconsiderable Railers, who can (according as it may be advantageous to them) either unsay what they said, or gain-say the greatest Truths: these in Truth require rather Our pity than revenge; and therefore we shall not in the least resent Our injuries, lest we should set a value and estimation upon that which has no worth in it; Nor make use of Spleen, where Scorn and Contempt better becomes Us.

XVII. For it is as incredible that an evil man should do or speak good things, or lead a Life of Honour, as that a Leo-

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pard should change his Spots, or a Blackmore his Skin: if he does, it is altogether as unnatural in the one, as unlikely or impossible in the other. Vanity and Mischief are implanted in their very Natures, and such can never so much as seem good, but with a design of Evil: the same Fountain cannot send forth both Salt Water and Fresh. And to me the good Word of such cannot be but an Intolerable reproach and scandal, whilst the ill Language of those viperous persons shall stamp the Characters of Glory, and leave on the Head of him they smite, a Monument of Worth and Honour. Whatsoever such men as these praise must be bad like themselves; and those things only good which they Condemn, because opposite to their Natures: for they can speak well of nothing but what is like to, or agrees with their pernicious Appetites.

XVIII. There is scarcely indeed any worthy thing that can escape the lash of these prophane and licentious Tongues: No, not the Kings and Princes of the Earth with all their Might and Power; Not the Holy Saints and Martyrs, with all their Sanctity and Innocency. The Holy Jesus himself Our Lord and Master when upon Earth, suffered under immense heaps of Contumely and Reproach. What than am I, that I should hope to escape a part of the same Lot? or, for what reason should I think not to tast a Portion of the same Cup? These great Examples are mighty incitements to Vertue and Honour, and ought to Exert Our Patience, and to encourage us to persevere in well doing in spite of all gain-sayers: To make Detraction only a Spur for Virtue, and a Monitor perpetually to Caution us.

XIX. For these reasons it seems not prudence to be concern'd at the Calumniations of Our Adversaries (nor indeed are we in the least measure:) We have Learnt the way of slighing them, whereby we have not only disappointed the poison of their malicious Tongues, but being made impenetrable by the mighty Power of Our Innocency, and Clearness from the Guilt of all their Accusations, have caused their mortiferous Venom to revert into their own Bosoms, where, as a Worm that never dyes

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it shall perpetually gnaw them, reflect upon their Faces their own Baseness; and besides make them bite their own Tongues for vexation, and Eternally fret themselves to the highest degrees of Rage, Fury and Madness, for that they should so ill use and Manage their small pittrance of Malignity; and especially to one, who so much contemns, and was before hand so well armed against it. Tis no matter who says fine Gold is Brass, or Silver Clay; the former will be fine and right still notwithstanding the ill Name; nor will the latter cease being Silver, altho you cast dirt upon it.

XX. But if any shall yet (because they cannot master their Envy) enveigh against what we have done, or any part thereof: we here signify, That altho we bear no contentious Spirit, but have made peace our way; yet we are and ever shall be a real and faithful Servant to Truth, but professed Enemy to every false thing and way. There is nothing else in the World, but the VERITY it self, which is worth Our contending for; nothing besides which shall ever be any engagement to Us: for the sake of which, we hope we shall always be both able and willing, not only to run all hazards on its behalf, encounter every difficulty: but also to stand in the Face of all its opposites, accounting nothing else dear to us in this World.

XXI. It has been greatly Our Care and Dilligence, (through this whole Work, to perfect it (as much as might be) from Our Own Experience: and this we sincerely deliver to the World, that as we have had the help of none in composing of it, so) the Method we have proposed here, is Our daily Practise, confirmed from manifold and eminent Proofs, for near 20 years last past: herein, we impose nothing upon any, every one may follow that which pleases him best; he that dislikes, may persue his own way: yet this we boldly say, That we have been so free and clear through the whole discourse, that for the most part, what is there spoken may certainly be trusted to.

XXII. The Therapeutick prosecution of each Disease is divided into distinct Paragraphs, wherein we have managed the

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Cure according to the Number and Order of the various Indications or Intentions of Cure. And in so doing, We have not promiscuously jumbled together all sorts of Medicaments good against the same Disease, but have divided them according to the Number and Order of the said Intentions: which of how great use it may be to all young Students, and practisers of this Art, we leave for others to judg. Moreover the things which we have ennumerated in the Method of Cure, are those of greatest repute and estimation among practical Physicians; such as have been confirmed unto us by manifold Experiences, even of the most Famous and Learned men, through the Series of all Ages: And of such tryed Remedies, this Our Work is not slenderly stored; the performance whereof has cost us no little Labour.

XXIII. We have scrutinized the best Authors, to many of which we have been very much beholden. Among the Mathematical Tribe, we advised with Hermes, Ptolomeus, Æschuides, Junctinus, Naibod, Gauricus, Regiomontanus, Argollus, Durretus, Kepler, Lilly, Morinus, and others. Among the Anatomists, we applied Our selves chiefly to Fallopius, Vesalius, Kyperus, Folius, Laurentius, Spigelius, Bauhinus, Malpighius, Willis, Vesslingus, Riolanus, the most famous Bartholine, and some few more. Among the Chyrurgick Tribe, we sought to Celsus, Ægineta, Arnoldus de Villa Nova, Aquapendens, Parræus, Severinus, Sennertus, Valeriola, Hildanus, Pigræus, Scultetus, Barbettus, and some others. Among the Medical Tribe, We consulted Hippocrates, Galen, Avicen, Dioscorides, Capivaccius, Fernelius, Matthiolus, Eraustus, Fracastorius, Septalius, Zacutus, Forestus, Rudius, Petrus, Joel, Regius, Zechius, Platerus, Sennertus, Riverius, Sylvius, &c. Among the Chymists we made use of Paracelsus, Crollius, Hartman, Faber, Quercetan, Mynsicht, Untzer, Sala, Mylius, Horstius, Poterius, Schroder, Zwelfer, Beguinus, Grulingius, Cloßæus, together with a Multitude of others; whose Names shall Live in an Honorable esteem through all succeeding Generations.

XXIV. As this is accepted and taken in the better part, so

We

we may farther dilate Our self upon this Subject hereafter ; this being but the Ground-work or Plat-form, upon which we intend to Build the whole Art of Medicine. Till then, Reader, Our Advice is, that in all faithfulness and singleness of Heart, thou maist walk uprightly in Thy Generation, looking more to the Power of an endless Life (which God has prepared for all such who really love and cleave unto him,) than after the fading Pleasures, transitory Glories, or corruptible Riches of this World. Thus committing thee to the Tuition of the Highest, and the Contemplation of his Wonderful Works, who of nothing made ALL Things that are, I here wish thee all happiness, with the profit of these my spare hours, ardently desiring to approve my self a real Friend and Servant to as many as Love uprightness and Truth.

Postscript.

I. IN my Pharmacopæia lately emitted into the World, we did promise to supply Practisers of Our Art, with the Usual Medicines therein contained. But since the coming forth of that Book, I am very sensible how much that Advertisement has been misunderstood by the Misapprehending the Word [USUAL,] as if I intended all the Medicaments in that Work, a thing which if not impossible for one Man to accomplish, yet very Improbable, by reason of the Excessive charge, which such an undertaking would put a Man to.

II. For in the Composing of that Work, it was only my Intention, To represent to view, a Summary of the most approved Authors; not to invite Practisers to the entertainment of all that variety in their Practise. Nor do I think it needful

for any Physician whatsoever (let his practise be never so great) to clog himself with more than thirty, or forty, or at most fifty good Medicaments; such as are choise, well-made, adapted, and fitted to the Chief intentions, about which he knows his Practise to be Exercised. If any unusual Exigency falls out, he may have for such a particular occasion, a particular and specifick Medicament made; and this is indeed the *Modus practicandi* of the most approved Physicians, which is very Commendable.

III. I know also that in many young Physicians, there is a want of that Judgment, to make a good Choise of such Medicines, as may answer their desired ends. Such Judgment is attained by long Practise, deep ratiocinations, manifold exertations, and a clear, undisturbed, and indubitable proof of the Powers of such things as we have either already tryed, or daily make experience of. I have long since made a choise of what I constantly use; most of which things are purity it self, and will keep hundreds of years without corrupting in the least measure: But 'tis true, there may be many others full as Good, as those which I have chosen, which in my Practise are rejected. The Charge would be too great for me to grasp at every thing which would be alike good; for which cause I content my self with a certain number of such Remedies, as I have already had experience of to be powerful. If Divine Providence casts upon me the Knowledge of any thing which exceeds the former; I embrace it, and substitute it in the place of what I formerly made use of, less efficacious: This is in Truth my manner of dealing with Medicines.

IV. For this cause sake, we have added at the end of this Postscript a Catalogue Exhibiting such Medicaments as we daily make use of in Our own singular Practise, and for the most part keep ready prepar'd; you have the *Recipe's* of the same in their proper places, either in *Our Pharmacopœia* lately Published; or in *Our Doron*, now in the Press; where also you will find their severall Preparations, Vertues, Use and Dose: to which we have also added the just Prizes of each; all which we have done,

done, both to justify Our own Intentions, and that no Man may be frustrated in his Expectations, or deceived in their Values.

V. Besides those contained or named in that Catalogue, we will not promise any other preparation to be kept in a readiness by Us. However if any man desires any *singular Preparation* besides what is in the Catalogue exhibited; he may upon the Communicating of his purpose to me, have the same faithfully prepared and made. These things I thought necessary to signify, that such persons may know as well what they may expect from me; as what they may have ready prepared at a just, certain, and reasonable Rate; which is so fixed, *that the buyer may not be abused, nor the Author Condemned of Partiality or Injustice.*

VI. There is a kind of Medicine which several Ancient Authors give the name of *Quintessence* unto, as being the essential, subtil and ætherial part, freed from all terrestreity and filth, and exalted to the highest degree of purity: This name we have not in Our Catalogue following retained, but have in place thereof given (to such like Medicines) the appellation of *Potestates* or *Powers*; because the whole and intire *Essence*, or *Being*, with all the *Powers* of any simple Body, as *Salt*, *Oyl*, and *Spirit*, are perfectly elucidated, and kept united in one *Similar* or *Simple* and *Congenerous* Substance or Body.

VII. In the following Work we have often made mention of our *DORON*, which is now in the Press, and will in a short time be delivered thence, and made Publick: In the mean season we think it convenient to give an Account here, of what that Book is. It is a supplement to our *L O N D O N Dispensatory*, containing (in three Books)
1. Additions to the *Materia Medica*, in a compendious method. 2. Additions to the *Internal Compound Medicaments*. 3. Additions to the *External Compound Medicaments*. Wherein you will find the Art of Compounding Medicines: The Art of Chymistry exemplified: An Idea of the
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Process of the Universal Medicine of *Paracelsus*, taken from an Original Manuscript: together with many rare secrets in the *Medical Art*, not yet vulgarly known to the World; attained to by much Labour, Care, Pains and Industry. Many of them are retrieved out of the *Ruins of Antiquity*, where they were in danger of being eternally lost: Some of them were gathered out of *Manuscripts* of famous men, never yet Printed; others are the Gleanings out of the *vast Printed Volumes* of Medical Authors; things of most excellent use, yet often over-lookt by men of that Profession: And lastly, a great part of them were communicated to me by several Worthy and Learned men, men of great understanding, of profound parts, Universal Scholars; large in Experience, exemplars in Piety, and Professors of this Art, whose Learning, Pains, Industry, manifold Travels and Acquaintance with the most subtil, wise and ingenious men, in most Nations, Countreys and Kingdoms, might well intitle them to the Knowledge of such Secrets.

VIII. Moreover he that would truly understand the *Art of Physick* in all its parts, and the due *Administration of Medicines*; ought well to understand the *Mathematicks* in general, and *Astrology* in particular; without which, let him make the greatest proficiency that may be, he will be very lame or deficient in his understanding, and apparently halt in his Judgment; so that being unable to take true measures from the Genuine Principles of Art, he will be found often to run himself into gross Errors and Absurdities. Now that we might not leave the industrious Student void of such convenient helps, as might promote his Studies, and further instruct him towards the bringing him on to Perfection, we did some years since compose a small Tract, which was lately made publick, entituled *Hora Mathematica*, or the Soul of Astrology, containing that Art in all its parts; divided into four Books; shewing the *Names, Numbers and Natures* of the Faces of the Signs, Planets, Nodes, Aspects and Houses of Heaven; the ways of setting of a Figure; the Doctrine of Nativities, with
all

The POSTSCRIPT.

all the ways of rectifying, directing and giving Judgment thereon, according to the best Authors extant, deduced from a consideration of the *Signs, Nodes, Houses, Planets* and *Fixed Stars*, as they are related by *Position, Direction, Transit* and *Revolution*. Where also you have the *Via Nova Geæthliaca*, or our new way of managing Nativities, and finding out all their several Directions by inspection only, without trouble of Calculation, being the most consentaneous to *Nature, Reason* and *Truth*. And to the same Book we have also further added the Radical Solution of all manner of Demands, Radical Elections, the resolution of Horary Questions, the method of Annual Judgments, Monthly Observations, Judgments on Eclipses, Comets, Conjunctions of Saturn and Jupiter, Aphelions of the Erraticks, Meterologick Predictions, and a demonstration of the Aspects of the Planets, as also the various ways of finding the Planets and Fixed Stars (but chiefly the Moons,) *Rising, Southing* and *Setting* by *New Tables*, never before Published.

IX. The next thing which we shall Publish, will be our *Iatrica*, or *Praxis Medendi*, The Practise of Curing; being a Medicinal History of above three thousand of our own Observations, in the Cure of Diseases, digested each under its proper head; wherein, as occasion does offer, we shall also insert several of the most excellent Observations of other Famous men; some whereof are already Printed, and other some are fallen into our hands, in Manuscripts; the which, by reason of the Service they may do the Publick, we are unwilling should perish by the devouring Jaws of Time, for want of a seasonable Publication. Therein you will have for the most part, *The Constitution of the Body of the Sick; The Symptoms predominant; the exact method which was taken in the Cure; The several changes and alterations of the Distemper; together with an exact account of the Medicaments exhibited, viz. what they were, their Order of Exhibition, their various Doses and Success thereupon*. A Work it will be, without doubt of singular use to all the practisers of Our Art.

X. But because it will be *very Great* and *Voluminous*, where-

by the time of its publication would be long, and the charge of so great an undertaking not small; we have designed (by the advise of some Friends both *Physicians* and *Chyrurgians*, as also by the opinion of the *Book-seller*) to publish the same, sheet by sheet Weekly; which as it will be something of present satisfaction to the Buyer, so will it also make the Value in a manner insensible to him, and be a continual supply to the carrying on of so great a Work; which were it exposed whole, would scarcely be sold under 40 shillings a Book. The first sheet will be published upon Saturday the 18th of June, 1681. and so to come out weekly every Saturday through the whole year, till the Summe of all the said Cures are Expos'd. Each sheet will Treat of a particular Disease, according to the Method aforesaid: This we shall do, if God permit. By the help of this Work, the Practical Physician, will learn many things from Experience it self; which in like Cases (we doubt not) he may make use of, by the help of the Theory of Physick, and the power of his own reason, to many singular advantages of like kind.

Red-balls Salisbury-Court.
Fleetstreet, London.
 7 June 1681.

SALMON.

The Catalogue of the Medicaments afore specified, and the Page in Our *Dispensatory* where they are to be found, together with their certain Prizes by the Ounce.

		<i>Waters.</i>		
		lb	s.	d.
A	<i>Aque Ophthalmica Nostræ, p. 721 a</i>	0	1	0
	<i>Aque Benedicte Rulandi, p. 391 b</i>	0	0	4
	<i>Aque Philosophorum, p. 183 a</i>	0	2	6
	<i>Aque Mirabilis, p. 446 b</i>	0	0	4
	<i>Aque Cœlestis, p. 447 b</i>	0	1	0
	<i>Aque Cinnamomi, p. 451 a</i>	0	0	4
	<i>Aque Aromaticæ, p. 459 a</i>	0	0	8
	<i>Queen of Hungaries Water, Doron</i>	0	0	8
		<i>Spirits.</i>		
	<i>Spiritus Vitæ Aureus Rulandi, p. 320 a</i>	0	0	6
	<i>Spiritus Diapenti, p. 461 a</i>	0	2	6
		Spi-		

The Catalogue

	lb	s.	d.
Spirit of Wormwood, p. 439 a	0	0	6
Spirit of Vinegar, p. 180 b	0	0	3
Spirit of Scurvy Grass, Doron.	0	0	8
Spirit of Saffron, Doron,	0	1	6
Spirit of Oranges, Doron,	0	1	0
Spirit of Limon, Doron.	0	1	0
Spirit of Caraways, Doron	0	0	6
Spirit of Castor, p. 441 b	0	1	6
Spirit of Harts-horn, Doron,	0	1	6
Spirit of Guajacum, p. 468 a. b.	0	0	8
Spirit of Juniper-berries, Doron	0	0	6
Spirit of Lavendar, p. 440. b	0	1	0
Spirit of Mint, Doron	0	0	8
Spirit of Bawm, Doron,	0	1	0
Spirit of Niter, p. 369 b	0	0	6
Spirit of Rosemary, Doron	0	1	0
Spirit of Savin, Doron	0	1	0
Spirit of Wine of Tenizelius, p. 182 b	0	0	8
Spirit of Wine Tartariz'd, p. 183. a	0	0	8
Spirit of Angelica, p. 440 a	0	0	6
Spiritus Cardiacus, Doron	0	0	6
Spiritus Analepticus, Doron	0	0	8
Spiritus Carminativus, Doron	0	0	8
Spiritus Ex-Tribus, Doron	0	1	0
Spirit of Turpentine, p. 471 a. b	0	0	6
Spirit of Amber, p. 401 a	0	1	0
Spirit of Comon Salt, p. 357 a	0	0	9
Spirit of salt Dulcified, p. 359 a	0	2	0
Spirit of Sal Armoniack, p. 365 b	0	2	6
Spirit of Vitriol, p. 378 b	0	0	6
Spirit of Vitriol Vulnerary, p. 380 b	0	0	8
Spirit of Vitriol of Penottus, p. 381 b	0	1	6
Spirit of Tartar Philosophick, p. 385 b	1	0	0
Spirit of sulphur, p. 392 a b	0	0	6
Spirit of Sulphur Vulnerary, p. 394 a	0	0	8
Panacea Paracelsi p. 460 b	0	2	6
Oyls.			
Oyl of Wormwood, p. 464 a	0	3	0
Oyl of Aniseeds, p. 465 b	0	1	6
Oyl of Oranges, p. 464 b	0	4	0
Oyl of Limons, Doron	0	4	0
Oyl of Caraways p. 465 b	0	2	6
Oyl of Juniper-berries, p. 470 a	0	3	6
Oyl of Cloves, p. 466 b	0	7	6
Oyl of Wax, p. 256 b, 472 b	0	1	6
Oyl of Harts-horn, p. 207 b	0	3	0

Oyl

The Catalogue

	lb	s.	d.
Oyl of Sweet Fennel Seeds, p. 466 a	0	5	6
Oyl of Philosophers, p. 474 a	0	1	0
Oyl of Myrrh, p. 472 a. 166 b.	0	2	6
Oyl of Marjoram, Doron.	0	12	0
Oyl of Nutmegs, p. 467 a	0	8	0
Oyl of Rosmary, Doron	0	4	0
Oyl of Sassafras, p. 467 b	0	5	0
Oyl of Amber, p. 401 b 474 b	0	2	0
Oyl of Chio Turpentine, p. 471 a	0	1	0
Oyl of Sulphur, p. 392 a	0	2	0
Oyl of Vitriol, p. 378 b	0	0	9
Oyl of Tartar per deliquium p. 177 a	0	0	9
Oyl of Sulphur red, p. 393 b	0	2	6
Oyl of Mercury white, p. 298 b	0	10	0
Oleum Balsami Petri de Ebano, p. 477 a	0	3	0
Oyl of Savin, p. 477 a	0	8	0
Oyl of Mace, p. 467 a	0	8	0
<i>Balsams.</i>			
Bals of Sulphur with Turpentine, p. 390 a	0	1	6
Balsam of Sulphur Anisated, p. 390 b	0	3	0
Balsamum Nervinum Schroderi, p. 483 b	0	3	0
Balsamum Sacrum, p. 448 b	0	3	6
Balsam Pestilential of Schroder, p. 746 a	0	5	0
<i>Essences.</i>			
Essence of Scurvy Grass, p. 47 a	0	1	0
Essence of Caraphir, p. 160 b	0	2	0
Essence of Opium, Doron	0	1	0
Essence of Saffron, Doron	0	1	6
<i>Preparates or Powers, commonly called</i>			
<i>Quintessences.</i>			
Powers of Amber, Doron	0	1	0
Angelica, Doron	0	2	6
Aniseeds, p. 488 b	0	1	0
Ammoniacum, Doron	0	1	6
Bawin, p. 500 b	0	3	0
Bay Berries, Doron	0	2	0
Cloves, p. 493 b	0	2	6
Crani humani, Doron	0	10	0
Caraways, Doron	0	1	6
Cumin Seed, Doron	0	2	0
Citron Peels, Doron	0	2	0
Camomil, Doron	0	2	6
Caranthe, Doron	0	2	0
Dill, Doron	0	1	6
Fennel Seed, Doron	0	2	0
Gua-			

Of Medicines.

Powers of	lb.	s.	d.
Guajacum, Doron	0	2	0
Harts-horn, p. 505 a	0	3	0
Juniper-Berries, Doron	0	1	6
Limons, Doron	0	1	6
Lavender, Doron	0	3	6
Mint, p. 501 a	0	2	6
Myrrh, p. 500 a	0	2	6
Mercury, p. 501 a	0	12	0
Mastich, Doron	0	2	0
Marjoram, Doron	0	3	6
Nutmegs, p. 499 a	0	2	6
Oranges, Doron	0	1	6
Origanum, Doron	0	3	6
Penny-Royal, Doron	0	2	6
Rosemary, Doron	0	2	6
Rhodium, Doron	0	3	6
Rue, Doron	0	3	6
Sassafras, Doron	0	2	0
Sulpher, p. 507 a	0	2	6
Sagapenum, Doron	0	3	0
Savin, Doron	0	2	6
Sage, Doron	0	3	6
Southernwood, Doron	0	3	6
Tansey, Doron	0	2	6
Turpentine, Doron	0	1	0
Of Virtues, p. 510 b	0	2	6
Wax, Doron	0	1	0
Wormwood, Doron	0	1	6

Elixirs.

Elixir Subtilitatis Paracelsi, Doron	0	6	0
Elixir Proprietatis Paracelsi, p. 511 a	0	2	0
Elixir Sulphuris, p. 517 a	0	2	6
Elixir of Juniper Berries, p. 517 b	0	2	0
Elixir Vitæ Nost. Doron	0	2	6
Elixir Purgans Panchymag. p. 512 b	0	1	0
Elixir of Camphir, p. 514 a	0	0	8
Elixir Nephriticum, p. 514 a	0	0	8
Elixir Vitæ minus, p. 516 a	0	2	0
Elixir Vitæ majus, p. 515 a	0	2	6
Elixir Paralyticum, p. 517 a	0	2	0
Elixir in suffocatione Matricis, p. 516 b	0	1	6
Elixir Alexiterium, Doron	0	2	0
Elixir Stomachicum, Doron	0	2	0
Elixir Hystericum Maxij, Doron	0	2	6
Elixir Verrieli, p. 516 a	0	1	0

Elixir

Of Medicines.

	℥s.	s.	d.
Elixir of Bay-Berries, Doron	0	2	6
Elixir of Wormwood, Doron	0	1	6
Elixir of Bawm, Doron	0	2	6
Elixir of Mint, Doron	0	2	0
Elixir of Sage, Doron	0	3	6
Elixir of Rosmary, Doron	0	2	6
Elixir of Orange-Peels, Doron	0	1	6
Elixir of Limon-Peels, Doron	0	2	0
Elixir of Lavender, Doron	0	2	6
Elixir of Carraways, Doron	0	1	6
Elixir of Castor, Doron	0	2	6
Elixir of Contra-yerva, Doron	0	1	6
Elixir of Virginian Snake-root, Doron	0	1	6
<i>Tinctures.</i>			
Tincture of Antimony, p. 321 a	0	4	0
Tincture of Benjamin, p. 158 b	0	0	8
Tincture of Saffron, p. 120 b 518 a	0	0	8
Tincture of Castor, p. 518 a	0	1	0
Tincture of Cinnamon, p. 519 a	0	1	6
Tincture of Amber, Doron	0	0	8
Tincture of our Family Pills, Doron	0	0	6
Tinctura Aurea, Doron	0	0	8
Tinctura Vitæ Nostra Doron.	0	0	8
Tinctura Cathartica Clossæi p. 519 b	0	0	8
Tinctura Catholica Grulingij, p. 524 b	0	0	6
Tinctura Cholagoga, p. 525 a	0	0	6
Tinctura Melanagoga p. 525 a	0	0	6
Tinctura Vitæ Mynsichti, p. 526 a	0	1	6
Tinctura Cardiaca, Doron	0	0	6
Tinctura Corticum, Doron	0	0	6
Tinctura Hysterica Nostra, Doron,	0	0	8
Tinctura Nephritica Nostra Doron	0	0	6
Tinctura Diaphoretica cum opio, Doron -	0	1	0
Tinctura Cathartica magistralis, Doron	0	1	0
Tinctura Piperis Nigri, Doron	0	0	6
Tinctura ex tribus, Doron	0	0	6
Tinctura Colocynthis p. 131 b	0	1	0
<i>Extracts.</i>			
Panchynagog. Vegetabile, Doron	6	5	0
Extract of Black Hellebor, Doron	0	3	6
Extract of Gentian, Doron	0	3	0
Laudanum Paracelsi, Doron,	0	12	0
Laudanum Nostrum, Doron	1	0	0
Laudanum Londinense, Doron	0	8	0
Extractum Opii Anodynum p. 534 b.	0	1	6

Magi.

Of Medicines.

Magisteries.		lb.	β	d
Resina Gallapæ, Doron		o	6	o
Resina Scammonij, Doron		o	4	o
Turpetum Minerale, p. 310 b		o	3	o
Turpetum Minerale verum, p. 312 b		o	10	o
White Precipitate, p. 304 a		o	3	6
Arcanum Coralinum, p. 305 a		o	6	6
Mercurius Vitæ, p. 300 b		o	4	o
Bezoar Minerale, p. 301 a		o	8	o
Sales.				
Salt of Wormwood, p. 546 b		o	1	o
Salt of Carduus p. 546 b		o	1	o
Salt of Steel, 291 a		o	1	6
Sal volatile cornu Cervi, p. 207 b		o	7	o
Salt of Amber, Doron		o	8	o
Salt of Ash, Doron		o	1	o
Salt of Broom, Doron		o	1	o
Salt of Vitriol, p. 375 b		o	2	6
Salt of Tartar, p. 176 b 383 b		o	1	o
Salt of Tartar Vitriolate, p. 177 a		o	2	6
Sal Tartari Emeticum Mynsichti, Doron		o	5	o
Saccharum Saturni, p. 294 a		o	1	6
Crytalls of Mars, Doron		o	1	6
Eni Veneris, p. 285 b		o	5	6
Sal Armonjack sublim'd, p. 364 a		o	2	6
Gremor Tartari, p. 175 b		o	o	3
Sal prunellæ, p. 367 a		o	o	4
Liquors.				
Liquor Vitæ Anodinus, p. 555 a		o	2	6
Liquor Ophthalmicus, p. 557 b		o	o	6
Liquor Alexipharmicus, p. 558 b		o	1	6
Liquor of Tartar, p. 177 b		o	o	6
Liquor for a Gonorrhæa, Synopsis p. 741 b		o	o	4
Liquid Laudanum, p. 169 b		o	6	o
Liquid Laudanum of Schefer, Doron		o	1	6
Liquid Laudan. of Helmont, Doron		o	2	6
Vinum Benedictum, p. 566 a		o	o	8
Acetum Alexiacum, p. 576 a		o	1	o
Poulters.				
Pulvis Cornachini veri, p. 641 a		o	5	o
Pulvis Arthriticus Paracelsi, p. 576 a		o	1	o
White flowers of Antimony, p. 339 b		o	10	o
Antimony Diaphoretick, p. 332 a b		o	1	o
Vitrum Antimonii, p. 330 a		o	o	6
Cinnabar of Antimony, p. 332 a		o	5	o
Regulus of Antimony, p. 333 a		o	3	6

Sol.

The Catalogue

	lb	β	d.
Sulphur of Antimony, p. 327 <i>b</i>	0	5	0
Crocus Metallorum, p. 333 <i>b</i>	0	0	6
Flowers of Sulphur, p. 387 <i>a</i>	0	0	2
Mercurius dulcis, p. 313 <i>a b</i>	0	1	6
Pearl prepared, p. 414 <i>b</i> —————	0	3	0
Our Royal Powder, Doron	0	5	0
Electuaries.			
Ovianum Verum, Doron	0	1	0
Confectio Anodyna, Doron,	0	7	0
Tberiac Londinensis nostra, p. 671 <i>b</i> ———	0	4	0
Pills.			
Pilulæ Lunares, p. 280 <i>a</i>	0	16	0
Family Pills, p. 702 <i>b</i>	0	5	0
Pilulæ Hydropicæ Bontii, Doron	0	2	6
Pilulæ Holagogæ, p. 702 <i>a</i>	0	4	0
Pilulæ Anodynæ nostræ, Doron —————	0	6	0
Pilulæ Odontalgicæ, Doron	0	3	0

Of the foregoing things, these following are Principal.

A Quæ Ophthalmicæ Nostræ, p. 721 <i>a</i>	0	1	0
Aquæ Benedictæ Rulandi, p. 391 <i>b</i>	0	0	4
Aquæ Cœlestis, p. 447 <i>a</i>	0	1	0
Queen of Hungaries Water, Doron	0	0	8
Spiritus Diapente, p. 461 <i>a</i> —————	0	2	6
Spirit of Harts-Horn Doron, and Phar. 207 <i>b</i>	0	1	6
Oyl of Amber, p. 401 <i>b</i> 474 <i>b</i>	0	2	0
Oyl of Sulphur, 392 <i>a</i>	0	2	0
Oyl of Tartar, per deliquium, p. 177 <i>a</i>	0	0	9
Oyl of Wax, p. 256 <i>a</i> 473 <i>a</i> —————	0	1	0
Balsam of Sulphur Anisated, p. 320 <i>b</i>	0	3	0
Essence of Saffron, Doron	0	1	6
Powers of Amber, Doron	0	1	6
Powers of Anniseeds, p. 488 <i>b</i>	0	1	0
Powers of Cloves, p. 423 <i>b</i> —————	0	2	0
Powers of Carraways, Doron	0	1	6
Powers of Fennel Seeds, Doron	0	1	6
Powers of Juniper-Berries, Doron	0	1	6
Powers of Limons, Doron —————	0	1	6
Powers of Myrrh, p. 500 <i>a</i>	0	2	6
Powers of Nutmegs, p. 499 <i>a</i>	0	2	6
Powers of Oranges, Doron	0	1	6
Powers of Rosemary, Doron,	0	2	6
Powers of Rhodium, Doron —————	0	3	6
Powers of Rue, Doron	0	3	6
Pow-			

Of Medicines.

Powers of Sassafras, Doron	0	2	0
Powers of Savin, Doron	0	2	6
Powers of Sage, Doron	0	3	6
Powers of Turpentine, Doron	0	1	0
Powers of Virtues, p. 510 b	0	2	6
Powers of Wax, Doron	0	1	0
Powers of Wormwood, Doron	0	1	6
Elixir Proprietatis, p. 511 a	0	2	0
Elixir Subtilitatis, Doron	0	6	0
Elixir Vitæ Nostra, Doron	0	2	6
Elixir Purgans, p. 512 b	0	1	0
Elixir Nephriticum p. 514 a	0	0	8
Elixir Paralyticum, p. 517 a	0	2	0
Elixir Alexiterium, Doron	0	2	0
Elixir Hystericum Maxij, Doron	0	2	6
Elixir of Bay-berries, Doron	0	2	6
Elixir of Bawm, Doron	0	2	6
Elixir of Castor, Doron	0	2	6
Elixir of Contrayerva, Doron	0	1	6
Elixir of Sage, Doron	0	3	6
Elixir of Wormwood, Doron	0	1	0
Tincture of Our Pills, Doron	0	0	6
Tinctura Cathartica Clossæi, p. 519 b	0	0	8
Tinctura Catholica Grulingij, p. 524 b	0	0	6
Tinctura Cathartica Magistralis, Doron	0	1	0
Tinctura Nephritica Nostra, Doron	0	1	6
Laudanum Paracelsi, Doron	0	12	0
Extract. Opij. Anodynum, p. 534 b	0	0	6
Turbeth Mineral verum, p. 512 b	0	10	0
Bezoar Minerale, p. 301 a	0	8	0
Salt of Wormwood, p. 546 b	0	1	0
Salt of Vitriol, p. 375 b	0	2	6
Salt of Tartar Emetick, Doron	0	5	0
Sal Prunellæ, p. 376 a	0	0	4
Liquor Vitæ Anodynus, p. 555 a	0	2	6
Liquor Ophthalmicus, p. 557 b	0	0	6
Liquid Laudanum, p. 169 b	0	6	0
Pulvis Cornachinij veri, p. 641 a	0	5	0
Our Royal po. dev. Doron	0	5	0
Mercurius Dulcis, p. 313 a b	0	1	6
Confectio Anodyna, Doron	0	7	0
Our New London Treacle, p. 671 b	0	4	0
Our Family Pills, p. 702 b	0	5	0
Hydropick Pills of Bontius, Doron	0	2	6
Pilulæ Holagoge, p. 702 a	0	4	0
Pilulæ Anodyne Nostræ, Doron	0	6	0

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F I N I S.

AN ADVERTISEMENT

Concerning Our

Catharticum Argenteum, or Silver Purge.

Although we determine not fully to reveal this Secret, yet we will shew you the principal Matters of which it is made, together with the manner of its process, as you'll find it in our *Doron Medic. l. 2. c. 11. §. 1.* The substance of which is this: *Rx of the best native Cinnabar reduc'd into fine Powder 3 v. fine silver in leaves 3 j. the best copper in small filings 3 jls: dissolve each apart in double Af, or the best Sp. of Nitre; make a Precipitation of the Calces, which you shall free from the Corrosive Spirits of the Af or Spirit of Niter according to Art. These Calces dissolve again apart in Spirit of Honey or Spirit of Salt; precipitate again, and sweeten, as aforesaid; from which being mixed together, you shall three times burn off a fit quantity of Rectified S. V. The Calces thus sweetned and dry'd, you shall put into a Glass Matraß, upon which you shall affuse our universal Menstruum, 3 xliij (which is the Menstruum of the World, and a true dissolvent) set them in a Philosophick heat, or the fire of Nature for 24 hours, so will it radically dissolve the Calces, and bring them into their first matter: this dissolution decant, filter and keep for Use: upon the remaining Calx undissolved (if any be) affuse more of the Menstruum, which digest, decant, and filter, as aforesaid: thus continuing the affusion of new Menstruum, so long till the whole Calx is dissolv'd, you will have, at last, an almost colour-less, smell-less, tast-less Liquor, especially if it be mixt with any other Vehicle.*

Here is to be noted § 1. That this Menstruum adds nothing of Virtue to the Medicine simply from it self, but only by Accident, as more perfectly dissolving and opening the bodies of those several Calces, whereby their *Potestates* or Powers more easily mingle themselves with the Sanguinous Mass, and thereby fix their Character upon the whole habit of the Body. § 2. That this Silver purge is an admirable thing beyond most other Medicaments, and performs whatever any other Purge or Vomit can do. If the Stomach be foul, it will cleanse it, and work gently both by Vomit and Stool; if the Stomach be not foul, it only works downwards: if it be given in a small Dose, it works neither upwards nor downwards, and yet by a constant taking of it for some time, as 2, 3 or 4 months, it cures almost incurable Diseases, without any manifest alteration. § 3. That it is call'd the Silver Purge, not that THAT is the ingredient whose quantity is largest, but because it is the ingredient from whence is drawn the Cathartick force of the Medicament, for that without it, the Medicament would not Purge at all. § 4. That by means of the Menstruum, the purging of the Medicine is not only certain, but determin'd to a certain time; for whereas without this Dissolution, the particles of the Calx might closely adhere to the Tunicles of the Ventricles, causing a continu-

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THERIAKAL

al working, sometimes for 2, 3 or 4 days together; now no such thing can be by reason of this liquid form, whereby it is seldom known to work above 2, 3, or 4 hours at most. § 5. That it opens all Obstructions of the Bowels, as Lungs, Liver, Spleen, Reins, Womb, Mesentery, and Lacteal Veins: but here is to be noted, That it ought to be given in Obstructions of the Lungs for 12 or 16 days, in such a proportion as it may neither Vomit nor purge, and that in all the Liquor the Sick drinks 5 or 6 times a day: in the other Cases you may give it in the largest proportion that is fit for the Age and Strength of the person. It cures Agues and Feavers of all sorts at 2, 3 or 4 times taking, and I have sometimes cured an Ague with it at once taking. It cures almost all Diseases of the Head, as Head-achs, Megrims, Frenzy, Madness, Falling-sickness, Apoplexies, Convulsions, Palsies, Lethargies, Vertigo's and other like Distempers of the Brain. It is a Specifick Remedy for the Cure of most Chronick Distempers, as Quartan Agues, Hypochondriack Melancholy, swellings of the Liver and Spleen, Cachexies, Green-sickness, Stoppage of the Terms, &c. It carries off the impurities of the Stomach, cleanses the Blood, restores it to its course and circulation, cherishes the Vital Spirits, restores the functions of all the Parts, adding to the Body Strength and Vigor. It perfectly cures the Gout, given in the Paroxysm so as it may not work; but after the Fit is over, so that it may work strongly. It cures the Scurvy, Dropsy and Kings-Evil, as it were to a Miracle; so also the Jaundice, Sciatica, Rickets in Children, Consumptions occasioned through manifold Obstructions, and most other stubborn Diseases, not to be cured by any other Medicine. It is also eminently good in the Cure of all running sores, old Ulcers, Fistula's, Pox, &c. in any part of the body, proceeding from what cause soever. § 6. That the way of exhibiting it, is either as a Diet, whereby the Body is only altered; or with an Intention to purge. If as a Diet, give 2, 3, 4, 6, 8 or 10 drops at a time, 4, 5 or 6 times a day in Beer, Ale or Wine, according as the Sick is in Age and Strength. If with an intention to purge, give to Infants (*quoad capax*) from 5 to 20 drops. To Children of 4, 6, 8, 10 or 12 years of Age, from 20 to 40 or 50 drops. To Youth from 10 to 16 years from 50 to 80 drops: From 16 or 18, to 40, 50 or 60 years of Age, from 120 drops, to 160 or 200 drops, which is from about *℥iij. ad ℥iiss.* or *℥ij*; always observing this, to encrease the Dose every time till it works enough. Give it in Broth, Beer, Ale or Wine, and that every 4, 5, or 6 day in the morning fasting; having some Broth, Mace Ale or Posset Drink to take after it; being mixt with its Vehicle, no Stomach can refuse it. One Ounce will make 4, 6, 8, or 10 several Doses, according to the Age and Strength of the Patient. § 7. Now this is specially to be noted, That in all Chronick Diseases it ought to be used (as well as for purging) in a Dietetick way

way; constantly giving it in a few Drops, as aforesaid, 5 or 6 times aday, by which means it insensibly alters the whole habit of the body, and may indeed serve instead of many other Diets in those very Cases. For this is very certain, that unless the whole habit be absolutely altered, no cure can be expected: for the cure in such Diseases alwayes follows the alteration of the Habit; as every man experienced in Physick does sufficiently know. 8. *Lastly*, That in External Diseases, you may bath the part or parts afflicted therewith for that it has both a digestive and resolutive Power: giving it also inwardly in a proper Vehicle (as aforesaid) either as Diet or purge, or both, as you see occasion requires: this being observ'd, the Alteration and Cure of the Disease will the more speedily succeed, to the satisfaction of the sick. But this you must note, That it be with Caution used to raw places least it cause much smarting: in this case let it be first diluted with a little Rose or Plantane Water.

An Ounce is 5 s. half an ounce is 2 s. 6 d.

Books Printed and Sold by *Tb. Dawks*, living at the End of
Thames street next Puddle-Dock.

I. **D**R. Salmon's Pharmacopœia Londinensis, or, the New London Dispensatory. In VI. Books. Translated into English for the Publick good: fitted to the whole Art of Healing. with the Preparations Virtues and Uses of all simple Medicaments, Vegetable Animal & Mineral: of all the Compounds both Internal & External; and of all Chymical Preparations now in use. And a Table with the Difference in point of Art, betwixt the Colledge and the Doctor: Also the Praxis of Chymistry, as its now exercised.

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1. a Supplement to the Materia Medica, in a Compendious Method:
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The Medicinal CHARACTERS.

℔ A pound.	⊖ Niter.
℥ An ounce.	⊕ + ⊖ + ⊕ Vitriol.
ʒ A dram.	○ + ⊖ Alum.
ʒ A scruple.	⊕ * Sal Armoniack.
gr. A grain.	□ Tartar.
M. A handful.	⊗ Sal Gem.
P. A pugil.	+ E Ashes.
P. A part.	□ Urine.
N°. Number.	○ Glass.
A. Ana, of each a like.	✠ Vinegar.
℥. ℥. half any quantity.	X. Talck.
q.s. quantum satis.	⚞ Sublimate.
q.v. quantum vis.	⊕ Quicklime.
R Recipe.	+ Fire.
S.A. Secundum Artem.	▽ Water.
♄ Saturn or Lead.	oo Oyl.
♃ Jupiter or Tin.	B. Balneum.
♂ Mars or Iron.	BM. Balneo Maria.
☉ Sol or Gold.	BV. Balneo Vaporis.
♀ Venus or Coppar.	℥. Alembick.
☿ Mercury or Quicksilver.	℥. AF. Aqua fortis.
♃ Luna or Silver.	AR. Aqua Regia.
♁ Antimony Antimony.	AV. Aqua Virz.
☿. ♂ Arsnick.	SV. Spirit of Wine.
♄ Sulphur.	SSS. Stratum super stratum, or lay upon lay.
♄ + Cinnabar.	
⊖ Salt.	

<p>Note, Twenty Grains Three Scruples Eight Drachms Twelve Ounces</p>	}	make	{	<p>a Scruple. ℥ a Drachm. ʒ an Ounce. ℥ a Pound. ℔</p>
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SYNOPSIS MEDICINÆ.

LIBER I.

The Diagnosticks.

CHAP. I.

OF NOTATION.

I. **A**strological Medicine is that which teacheth Astrally, or from the signification of the Cœlestial and Starry influences, how to *Know, Judge of, and Cure* all such Diseases and Infirmities, as may any ways seise, affect, afflict, or infect the Bodies of humane kind.

II. The Signs by which the Disease is known are called the *Diagnosticks*: The Indications, by which we judge, are called the *Prognosticks*: And the Rules by which we Cure, are called the *Therapeuticks*.

It is very necessary first to know what the Disease is, before we proceed any further: and not only to know what it is, but also the Indications of life or death, before we offer to meddle with, or consider the Cure.

III. The Diagnosticks therefore

considered Astrally, are either to be taken at the time of the Decumbiture, from the Ascendent, sixth and twelfth Houses, their Lords, Planets posited therein, and Planets afflicting any of the aforesaid Points: Or otherwise Radically, from the then present Directions, and Transits of the Hylegs, or other the eminent and concern'd significators.

It is to be understood that we do not here intend to write a compleat Treatise of Astrology; from the beginning, foundation, and first principles thereof: but presupposing the Student to have sufficient Knowledge in its Rudiments, as the significations of the Signs, Planets, Houses, Aspects, Nodes, setting of a Figure, &c. we shall abruptly fall upon this our intended work; yet so providing as that nothing, that shall be material, or otherwise necessary

to the compleating and perfecting of this our present Discourse, shall any way, in the least be wanting: But shall fully, substantially and clearly contain in sum the substance of all Authors, that ever wrote on this Subject, extant in what Language soever; and that with as much plainness and significancy as the meanest capacity can desire.

IV. In considering the *Diagnosicks* from the Decumbiture, the Signs, Houses, Planets, Aspects and Nodes are to be understood according to their nature or temperature, according to the parts of the Body they govern, and according to the Diseases they signify.

V. The Disease is to be known from the aforesaid essential significations, considered with the Planets accidental Configurations, and position in the figure of Heaven.

VI. In considering the *Diagnosicks* radically, the nature of Directions and Transits are to be understood 1. simply, 2. affectedly as to the Significator, Promittor, houses they are posited in, or Lords of, and House the Direction or Transit falls in.

VII. In considering the *Prognosicks* from the Decumbiture, we shall do it either generally or specially.

VIII. Generally it will be performed from the figure of the Decumbiture, by considering the Ascendent, fourth and eighth houses with their affections.

IX. Specially, from the Critical figure, Position of the Moon, parts afflicted, and Quality of the Disease.

X. The *Prognosicks* are confi-

dered radically from the then present Directions and Transits, in respect as they have relation to the Significators of life in the Radix: or else some affection in the present Decumbiture.

XI. The *Therapeuticks* Affrally understood are to be considered from the Decumbiture in respect of signification, as to the Diseased, the Physician, Quality of the Medicine.

XII. Or in respect of the Matter of Medicine, as to Vegetables, Minerals and Animals, Galenically and Chymically considered; and specially appropriated to the Celestial influences.

XIII. And this is to be understood essentially, as it hath accidental relation to the Ascendent, seventh and tenth houses, with their particular affections.

XIV. The *Therapeuticks* radically considered are taken from the Directions and Transits then occurring, as they have relation to the Radix and Decumbiture, or their particular affections both ways, in respect of the aforesaid points.

Hitherto of the Astrological Method, the Natural follows. Therefore,

XV. The *Diagnosis*, *Prognosis*, and *Therapia*, according to Hippocrates, are to be considered from the body of the Sick, and the symptoms that thence appear; first generally, from the Age, Habit, Season, Air, Diet, and general Accidents: secondly, specially, from the Parts, Humours, Causes, and proper Signs of each Disease, particularly by name.

These things we thought good to signify

signifie, that thou mightest fully understand our intent, and at first sight comprehend (as in an Idea) the whole and compleat Matter of all the subsequent Books: That here

speaking once for all, we might not, in any of the following Chapters of this Work, often repeat these things in vain.

CHAP. II.

Of the Signification of the Signs.

I. **Aries** is hot and dry, cholerick; governs the Head and all parts comprehended within it or belongs to it, to the first Vertebra of the Neck: of Diseases it signifies Vertigo, Frensy, Lethargy, Forgetfulness, Cataplexia, Apoplexia, Dead Palsie, Falling-sickness, Convulsions, Tremblings, Madnes, Melancholy, Freckles, Sun-burnings, Wheelks, Pusles, Polipus, Small Pox, Measles, and Feavers.

II. **Taurus** is cold and dry, melancholick; governs the Neck, Throat, Channel bone, and Vertebra of the Neck: of Diseases, it signifies, Fluxes of Rheum, Wens in the Neck, Soreness thereof, Kings Evil, Quinsies, and Consumptions.

III. **Gemini** is hot and moist, sanguine: governs the Hands, Arms, Fingers and Shoulders: of Diseases, all belonging to those parts whether Natural or Accidental, as Fractures, Dislocations, &c. as also Windiness and Corruption of the Blood, Pleurifies, Fluxes of the Blood, Apoptumes, Sounding fits, Epilep-

sy, Apoplexy, fits of the Mother.

IV. **Cancer** is cold and moist, flegmatick: governs the Brest, Ribs, Lungs, Liver, Pleura, and Ventricle of the Stomach: of Diseases, all that belong to the Lungs, Stomach and Liver; as shortness of Breath, Pleurifies, want of Appetite, Digestion, Cancers there, Coughs, Phthisicks, Dropsies, Surfeits and Scurvy.

V. **Leo** is hot and dry, cholerick: governs the Heart, Back, Vertebra of the Neck and Pericardium: of Diseases, all passions of the Heart; as Swoundings, Tremblings and Qualms; Violent burning Feavers, Plague, Measles and Small Pox, Sore Eyes, Yellow Jaundices, and Diseases arising from Choler.

VI. **Virgo** is cold and dry melancholick: governs the Bowels, Belly, Spleen, Omentum, Navil and Diaphragma: of Diseases it signifies all belonging to the aforesaid places: as Worms, Wind, Obstructions, Hardness of the Spleen, Mother,

Hypocondriack Melancholy, Cholick and Illiack Passions.

VII. ♋ *Libra* is hot and moist, sanguine : governs the Reins, Kidneys and Womb ; and signifies Diseases thereunto belonging ; as Stone, Gravel, Heat, Wind, Cholick and Gonorrhea, flux of the Terms, Whites.

VIII. ♏ *Scorpio* is cold and moist, flegmatick : governs the Secrets, Groin, Seminal Vessels, Bladder and Fundament : Of Diseases, it signifies such as generally infect those parts, as Gravel and stone in the Bladder, Strangury, Fistulae, Hemorrhoids, French Pox, Running of the Reins, flux of the Terms, and Whites, Priapismus, and Scurvy.

IX. ♊ *Sagittarius* is hot and dry, cholerick : governs the Thighs, Hips, and *Os sacrum* : of Diseases, the Sciatica, Windy Gouts, Running Sores in those places, heat of the Blood, Pestilential Feavers, and others proceeding of Choler and Intemperance, Swounings, Falling-sickness, Apoplexy, fits of the Mother.

X. ♐ *Capricornus* is cold and dry, melancholick : governs the Knees and Hams : and signifyeth all Diseases incident to those places ; as Gouts, Sprains, Fractures, Dislocations ; as also Leprosies, Itch, Scabs, Morpew, Scurf, Red spots, all Diseases of Melancholy, as Frenzy, Madness, Stammering.

XI. ♑ *Aquarius* is hot, and moist, sanguine : governs the

Legs and Ankles : it signifies Lameness and Bruises there, Fractures and Dislocations, Corruption and Putrefaction of the Blood, Pleurifies, Dysenteries, Aposthumes or Swellings, Inflammations, Quinsy, Kings-Evil, Pimples and Breakings out.

XII. ♒ *Pisces* is cold and moist flegmatick : governs the Feet, Toes and what belongs to them : it signifies Gouts, Lameness, and Aches incident to the Feet, Kibes, Chilblains, Scabs, Itch, Bitches and Breakings out, Dropfie, Scurvy, and all cold and moist Diseases proceeding from Flegm and mixt Humours, fluxes of the Bowels.

♈ The Horned Ram the Head doth Crown :

♉ The Bull upon the Neck looks down :

♊ The Twins as Arms joyntly embrace :

♋ The Crab doth Brest and Stomach Trace :

♌ The Lyon doth the Heart ore-look :

♍ The Belly is the Virgins Book :

♎ The Ballance gives the Reins a Law :

♏ The Scorpion does the Secrets Awe :

♐ The Archer does the Thighs Command :

♑ The Goat upon the Knees does Hand :

♒ The Tankard-bearers Leggs are slow :

♓ The Fishes without Feet can Go.

CHAP. III.

Of the Significations of the Houses.

I. **T**HE Houses of Heaven have the same Signification with the Signs : the first House as *Aries*, the second as *Taurus*, and so on, both as to the Temperaments, Humours, Parts of the Body and Diseases.

II. Yet with this difference, that those Houses that are in Trine one to another, shall generally signifie promiscuously one and the same part of the Body : an afflicting Planet in the fifth or ninth House, shall certainly afflict the Head as well as in the Ascendent, especially if he be in *Aries* : *the like understand of the rest ; this is by sympathy.*

III. The Sign Ascending in the Radix of the Sick shall most properly signifie his Head, the next his Throat, with the Diseases adjunct thereto, and so through the Zodiack, and in like manner the House shall signify the same : But in the Figure of the Decumbiture it is almost rational to conceive the Significations of the Signs to cohere with the House.

IV. The first, fourth, seventh and tenth are Angles : the second, fifth, eighth and eleventh Succedents : the third, sixth, ninth and twelfth are Cadents.

The meaning of which is, a Planet Angular is strong ; Succedent weak ; and Cadent not able to help himself.

V. *The first House signifies the Head, Face, Nose, Brows, Cheeks, Chin, Eyes, Eares, Teeth and other parts of the Head : Of Diseases, all such as are Hot, Dry, Fiery, Chollerick, Intemperate and Violent ; Pushes, Wheelks, Pimples in the Face, smal Pox, Hare Lips, Polypus, Ring-worms, Falling-sickness, Apoplexies, Megrims, Tooth-ach, Headach, Vertigo's, Lethargies, Carus, Frenzy, Madness, Loss of Memory, &c.*

VI. *The second House signifies the Neck, Throat, Uvula, Wind-Pipe, Tongue, and parts under the Chin ; Of Disease, the Kings-Evil, Quinsies, Imposthumes, Rheums, Wens, matter sticking in the Throat, swelling of the Almonds, Cancers of the Tongue, &c.*

VII. *The third House signifies the Shoulders, Arms, Elbows, Wrists, Hands and Fingers. Of Diseases, all happening to those parts, Corruptions of the Blood, Pleurisies, Surfeits, Wind in the Veins, distemper in the Mind, &c.*

VIII. *The fourth House signifies the Brest, Sides, Mesentery, Liver, Spleen, Lungs, Ribs, Breasts, Precordiacks. Of Diseases, all those of the Brest, Stomach, Dugs, Liver, Spleen, Lungs and Mesentery ; want of Appetite, weakness of Digestion, Coldness of the Stomach, and pain there, Ulcers, spitting Blood, Phthisick,*

Salt, Flegm, Coughs, Impostumes, Cankers, Vomiting, &c.

IX. *The fifth House signifies the Heart, Gall, Stomach, middle of the Back, and left Breast. Of Diseases* Plurifies, Convulsions, Fainting, Tremblings, Passions of the Heart, pains in the Back and Sides, violent Burning Fevers, Plague, Measles, small Pox, Yellow-jaundice, Barrenness, Sore-Eyes, &c.

X. *The sixth House signifies the Bowels, Belly, Omentum, Guts, Peritoneum and parts adjoining. Of Diseases*, the Wind-Cholick, Worms, Obstructions in the Bowels, and Mesariacks, Looseness, Bloody flux, and all other Fluxes of the Belly, Wind, and Gripping of the Bowels.

XI. *The seventh House signifies the Reins, Loyns, Navel, Small of the Back, Bottom of the Belly, Buttocks, &c. Of Diseases* the Stone or Gravel in the Reins, Obstructions in the Kidnies, stoppage of Urine, and difficulty of making Water, Sciatica, Impostumes and Ulcers in the Reins, weakness and pain in the Back.

XII. *The eighth House signifies the Privy Parts, Womb, Bladder, Cods, Groin, Arse, &c. Of Diseases*, Stone and Gravel in the Bladder, Barrenness, Piles, Fistula in Ano, Gonorrhœa's, Priapisms, Obstructions, of Urine and the Terms, flux of the Terms, continual Pissing, Strangury, Tenasmus, French Pox, and all other Diseases of the Womb and Privy parts.

XIII. *The ninth House signifies the Hips, Buttocks; Thighs and Os sacrum. Of Diseases*, all Fi-

stula's and hurts in those parts, the Sciatica, Falls from Horses, Corruption of the Blood, Heat, Intemperance, Burning and Malign Feavers, and the Plague or Pestilence.

XIV. *The tenth house signifies the Knees, Hams, and Upper part of the Leggs. Of Diseases* all subject to those parts, Strains, Swellings, Oedema, Gout in the Knees, Fractures, Leprosies, Itch, Scabs, Fistula's, and the like.

XV. *The eleventh House signifies the Legg downwards, the Shins, Calf of the Legg, and small of the Legg. Of Diseases*, all Diseases of those parts, as also Surfeits, Distempers in the Blood, Corruption and Putrefaction of the Humours, Wind, Melancholy, Vapours, Cramps, Convulsions, Pocky Nodes, Nocturnal Pains in the Shins, Scurvy, &c.

XVI. *The twelfth House signifies the Insteps, Anckles, Feet and Tocs. Of Diseases*, the Gout, all Lameness and Aches incident to those parts, watery Humours, Dropsie, Surfeits, Scurvy, Flegm, Salt Humors, Scabs, Itch, Botches, Boils, Breakings out, Sores, Ulcers, Fistulas, and moist Diseases, or such as proceed from Moisture.

XVII. *Moreover it is to be observed, that the Planets joy, or rejoyce, each in their respective Houses, viz. in those which are agreeable to their natures or properties.*

Thus ☉ rejoyces in the Ascendant before Day; because it is the entrance into Life; and he rejoyces in the Medium Cœli by Day, because it is the Enterance into Honour and Health. ☽ rejoyces

joyces in the Ascendent by Day, and in the Medium Cœli by Night, from the aforefaid Reason; The Sun and Moon being the Significators of Life and Honour. What Succeeds Honour is Riches, which is signified by ♃ and the House under the Earth, in Δ to the Medium Cœli, viz. the II, and what Succeeds Life in this World, is the Life in that to Come, which is signified by ♃ also, in that House above the Earth in Δ to the Ascendent. Therefore ♃ is said to Joy or Rejoyce in the II and IX. What Succeeds Riches is our Pleasure and Off-spring, whose Significatrix is ♀, and the House under the Earth in Δ to the Ascendent viz. the V. as also that House above the Earth in * to the Ascendent (which is in Δ to the VII; for without a ♂ of the Ascendent and VII there can be no Off-spring,) therefore ♀ is said to rejoyce in the V and XI. Every thing Living, has its Opposite, Enemy or Adversary, and that which stirs up Strifes, Quarrels and Contentions with it, they are generally signified by ♁, and the House in ♂ to the Ascendent (which signifies the Body and life of Mankind) viz. the VII: and because the IX, signifies the Life to come, and the III is in ♂ to it, and in Δ to the VII, the Opposer of the Natural Life; Hence ♁ is said to Rejoyce in the VII and III: as also because his Houses are in ♂ to the Houses of ♃ who Joys in the IX. The Grave is signified by I.C. and Death by the VIII, which is in Δ to the J.C. and

because ♄ signifies the Ruin and Destruction of all things, therefore he is said to Joy or Rejoyce in them. But because there is no end accomplished without a Medium, and that the Medium which leads to Death and the Grave is Sickness and Diseases, those Houses are said to be Adjuvants or Helpers on of those ends, viz. the VI and XII, being in Trine and Sextile to the VIII and I.C. the XII also being in private enmity with the Ascendent or Significator of Life: And because ♂ by reason of his violence by heat and dryness causes the most eminent and evident vicissitudes and mutations from a state of Equality and Temperance, to a condition of Inequality and Intemperance, whereby Diseases are introduced as Mediums to the end, therefore ♂ is said to Rejoyce in the said VI and XII Houses. Thus you see the reasons of the Planets Joy, in the Houses of Heaven.

Planets	♄	♃	♂	☉	♀	♁
houses of	iv	ii	vi	A	v	iii
their joy	viii	x	xii	x	xvi	ix

XVIII. Lastly, it will not be much from the matter to give you the general signification of the XII Houses as they are laid down in Ptozelius.

Prima Domus Vitam Largitur;
& altera nummos;
Tertia dat Fratres; Venerandos
quarta Parentes;
Prolem quinta dabit; Morbos
tibi sexta minatur;

Septima Conjugij domus est : O-
stavaque Morris ;

Religio sequitur ; confert tibi
decima Honores ;

Hinc tibi Amicus erit ; Postremam
Inimicus habebit .

*First House Life signifies ; the second
Wealth ;*

Kindred the third ; the fourth our

Parents Health ;

*The fifth our Off-spring ; and the
sixth our Pain ;*

*Marriage the seventh ; eighth our
Death and Gain ;*

*The ninth Religion ; tenth our Ho-
nours Fate ;*

*Friendship the eleventh ; and the
twelfth our Fate.*

CHAP. IV.

Of the Signification of the Planets.

I. ♄ *Saturn* is cold and dry, melancholick : he rules the Spleen, right Ear, Bones, Teeth, Joynts, Retentive Faculty, Melancholly humor : *Of Diseases*, all Quartan Agues, Diseases proceeding of Cold, Black Jaundice, Tooth-ach, Melancholy and Diseases coming of it, Leprosie, Consumptions, Palsies, Fears, foolish Fancies, Gouts of all sorts, Hemorrhoides, Broken Bones, Dislocations, Deafness, Pain in the Bones, Grief, Melancholy, Madness, Poysons, Stone and Gravel in Reins and Bladder.

II. ♃ *Jupiter* is hot and moist, sanguine : he rules the Lungs, Liver, Veins, Blood, Digestive Vertue, Natural Faculty, and the Blood : *Of Diseases*, all belonging to the Liver and Blood. Inflammations and Apostumes of the Lungs, Pleurifies, Quotidian Fevers, Scurvy, Putrefaction of the Humours, and inward Ob-

structions of the Stomach and Liver, Rickets.

III. ♀ *Mars* is hot and dry, choleric : he rules the Gall, left Ear, the Apprehension and smell, the Bulk of the Head and Face, the attractive Faculty, the Blood and Choleric humour, as also the Seed of Man or Woman : *Of Diseases*, the Plague, all Burning Fevers, Tertian, Agues, Megrin, Carbuncles, Yellow-Jaundice, Burnings, Scaldings, Ringworms, Blisters, Phrenzey, Calentures, hot Diseases of the Head, Bloody-Fluxes, Fistula's, all Wounds whatsoever, Diseases in the Instrument of Generation, Stone in the Reins and Bladder, the Disuria, Iscuria, Stranguria, Diabetes, Small Pox, Shinglés, *St. Anthony's Fire*, Choler and Choleric Diseases, Hurts by Iron, Fire or Passion, Hecticks.

IV. ☉ *Sol* is hot and dry, choleric : he rules the Heart, Ar-

teries,

teries, Back and Sight, Right Eye of a Man, the Left of a Woman, the attractive Faculty, Cholerick Humour : *Of Diseases*, he signifies all Passions of the Heart ; as Faintings, Tremblings, Swoundings, Pimples in the Face, Red Choler, Weakness of the Sight, burning Fevers, putrid and rotten, Small Pox, Measles, Plague, spotted Fever.

V. ♀ *Venus* is cold and moist, phlegmatick ; she rules the Womb, Yard, Testicles, all the Instruments of Generation, the Reins, Bottom of the Belly, Throat, Womens Breasts, and in part the Expulsive Faculty, the Blood and flegmatick Humour : *Of Diseases*, all of the Womb whatsoever ; as Suffocation, Precipitation, Dislocation, &c. Diseases in the Members of Generation, Gonorrhea, French-Pox, inordinate Lust, Priapismus, Whites, Flux and stoppage of the Terms.

VI. ♂ *Mercury* is cold and dry, melancholick ; he rules the the Brain, Imagination, Tongue, Hands and Feet, Melancholy humour ; *Of Diseases*, such as are Incident to the Brain ; as Vertigoes, Madness, Defects of the Memory, Convulsions, Asthma's,

Imperfections of the Tongue, Hoarseness, Coughs, Snuffling in the Nose, Stoppages in the Head, Dumbness, and whatsoever hurts the Intellectual Faculty, Palsy, Megrim, Apoplexy.

VII. ♀ *Luna* is cold and moist, phlegmatick ; she rules the Bulk of the Brain; the Stomach, Bowels, Bladder, Left Eye of a Man, Right of a Woman, and the Expulsive Faculty; the flegmatick humour : *Of Diseases*, Palsies, Chollick, Belly Ach, Diseases in the Stones, Bladder, Stopping and Overflowing of the Terms, Dropsies, Fluxes, all Cold and Rheumatick Diseases, Worms in the Belly, Rheums, Hurts and Weakness of Sight, Surfeits, Coughs, Convulsions, Falling-sickness, Kings-Evil, Apollhumes, Small Pox, Lethargies, and crude Humours in any part of the Body, and Diseases proceeding of Phlegm, as Flux of the Terms and Whites.

VIII. *Saturn* is cold and dry in the fourth Degree ; *Jupiter* is temperate : *Mars* is hot and dry in the fourth : *Sol* hot and dry in the third : *Venus* temperate and moist in the second : *Mercury* cold and dry in the second : *Luna* cold and moist in the fourth.

CHAP. V.

Of the Aspects of the Planets.

I. **A**N Aspect is a certain distance of place in the Zodiac, and made by the motion of the Planets to or from any Place, Point or Star; the chief being in number five: viz. \oslash Conjunction, \ast Sextile, \square Square, \triangle Trine, \oslash Opposition.

II Jupiter and Venus are said to be good Planets and Fortunes; Saturn and Mars to be evil Planets and Infortunes: Sol, Mercury and Luna indifferent. And so it is said the good Aspects of the good Planets are good, of the evil, evil, &c.

III. But it ought rather chiefly to be considered, that those Planets which are the Significators (not being afflicted) being essentially fortified; and such Planets as (being Lords of good Houses, and strong) behold the Significators by good Aspects to be Fortunes, and good Planets: their Opposites and such as afflict them to be Infortunes and evil.

And so in this case, if h be Lord of the Ascendent, in the Ascendent, and free from affliction, he is a fortune to the Sick, and so is \oslash also (being Lord of a good House, and behold out of a good House the Ascendent or his Lord by \ast or \triangle : and v and \oslash shall be Infortunes to the Sick being Lords of the 6, 8, or 12 Houses, and afflicting the Ascendent or Lord thereof either by \square or \oslash at the same time.

IV. Aspects are either Si-

nister, or Dexter.

V. A Sinister Aspect is that which is according to the succession of the Signs, and contrariwise,

Exempli gratia. A Planet in γ casts his sinister \ast to ii , his dexter to iii : his sinister \square to v , his dexter to vi : his sinister \triangle to ix , his dexter to x : the \oslash and \oslash are neither sinister nor dexter.

VI. And therefore as Aspects are manifold, so are their Significations: for a Planet being in sinister Aspect is of more force than a Planet in dexter.

But this is contrary to the Opinion of the Ancients.

VII. The good Aspects abstractly, are the \ast and \triangle ; the evil are the \square and \oslash ; the indifferent is the \oslash .

VIII. Aspects are either Partil or Platick.

IX. Partil Aspects are when a Planet is in the same Degree and Minute with another, in the Sign which constitutes the Aspect: a Platick is when Planets are within the half of both their Orbs.

So h in 10 Degrees of γ , is in Partil \ast to v in 10 ii : but in Platick \ast to \oslash in 14, 15, or 16, &c. of ii .

X. The Quantity of the Orb of Saturn is 9 Degrees; of Jupiter 9 Degrees; of Mars 8 Degrees; of Sol 15 Degrees; of Venus 7 Degrees; of Mercury 7 Degrees; of Luna 12 Degrees: of fixed Stars

Stars of the first Magnitude 8 Degrees; of the second 6 Degrees; of the third 4 Degrees.

XI. The Use of the Aspects, are in consideration of matter past, present, and to come.

For see from what Planet the ☽, Lord of the Ascendent, or other Significator last separated, what Planets they are in partil aspect withal; and what Planets they apply to, and so by considering the Aspect, and with what Planet or Planets it is made, and in what House, we are made able to judge of the Condition of the Sick past; the Condition present; and what for the future may really be expected.

XII. A ☿ Conjunction is when two Planets are in one and the

same Point of the same Sign: A

* *Sextile* is when they are removed one from another 60 Degrees: A □ *Square* when removed 20 Degrees: A △ *Trine*, when 120 Degrees: an ☿ *Opposition* when removed 180 Degrees.

XIII. The ☿ is good or evil according to the nature of the Planets conjoyned: the * is an Aspect of imperfect good: the △ of perfect good: the □ of imperfect evil: the ☿ of perfect evil, frustrating the intentions beyond all expectations; and destroying the matter with a vengeance; and so much the more if the impeding Planet be the more strong or weighty.

	☿	*	□	△	☿	
Dex. Sin.	γ	≡ II	☿ ☿	♄ ♄	♄	Sin. Dex.
Dex. Sin.	♄	☿ ☿	≡ ♄	☿ ☿	♄	Sin. Dex.
Dex. Sin.	II	γ ♄	☿ ☿	≡ ♄	♄	Sin. Dex.
Dex. Sin.	☿	♄ ☿	γ ♄	☿ ♄	☿	Sin. Dex.
Dex. Sin.	♄	II ♄	♄ ♄	γ ♄	≡	Sin. Dex.
Dex. Sin.	☿	☿ ♄	II ♄	♄ ☿	☿	Sin. Dex.
	☿	△	□	*	☿	

CHAP. VI. Of the Nodes.

I. THE ☿ Dragons head, *Arcturus* is naturally a Fortune, of the nature of Jupiter and Venus: signifying

Prosperity, Health of Body, and Content of Mind.

II It signifies good only then, when it is in the Ascendent,

dent, VII. and X Houses, or is joyned to the Lords of those houses, or Planets, posited therein.

III. It signifies evil when it is in the opposite House, signifying the thing, corporally conjoynd to the afflicting Planet, being more strong or weighty.

So if Caput be in the Eighth, or in ♄ of the Lord of the Eighth, it may demonstrate Death to put an end to the Disease.

IV. *Caput* in the sixth House, shews a suspicion of Witchcraft, however the Disease comes not by any dishonesty upon the Patients account: the reason of this Judgement is because ♄ is then in the XII. which gives fears of some evil Tongue, &c.

V. From the same reason *Caput* in the VI, in ♀, shews Diseases of the Reins, in ♂ Diseases of the Secrets, &c: For ♄ is in the opposite Sign; and contrary wife.

VI. *Caput* in the VI, in Conjunction with the Lord of the sixth, or twelfth is not Good, yet it shews a lessening of the Evils by those Planets threatned.

VII. *Caput* in Conjunction with a Fortune, in the Ascendent, X. or VII, shews approaching Health, the Goodness of the Medicine, or the Honesty of the Physician: but if this Conjunction, be made in the VI, the Patient is more Sick in Conceit, than in Reality, and therefore ought rather to look out for a cure for his Mind.

VIII. The ♄ Dragons Tail is called in Greek, *Kalabistaion*, an Infortune, of the nature of Saturn and Mars, signifying Mischiefs, Scandals, Shame, Sicknes and Discontent.

IX. *Cauda* ♄ only signifies those evils, being in the Ascendent, Seventh, Ninth or Tenth Houses, or conjoynd to their Lords or Planets posited therein.

X. But *Cauda* ♄ generally signifies to much the more good, by being posited in those places where ♄ signifies Evil, at Sect. 3. or be joyned to the more light or weak Planets; they being especially inimical to the Lord of the Ascend. and other Significators.

XI. *Cauda* in Aries, in the sixth, in Conjunction of Mars, causes the Measles and Small Pox: in Leo or Sagitary, violent malign and Pestilential Feavers: in the M. C. the Patient will receive wrong or hurt by his Physick: in the twelfth, occult Diseases, and danger or fears of Witchcraft.

XII. *Cauda*, in Taurus in the sixth, shews Obstructions of the Throat, and swellings of the Almonds and Uvula, pain and Gripping of the Bowels, proceeding of Cold, Wind, and Melancholy. In Virgo, a Violent flux of the Bowels: if it be a Woman with Child, she Miscarries; in Capricorn Obstructions of the Spleen or the Gout.

XIII. *Cauda* in Gemini, in the sixth, shews Surfeits: in Libra, a Weakness of the Back and Reins; in Aquarius, swelling of the Belly and Leggs. So also if in the Medium Cœli, but then there is commonly Running Sores, Ulcers or Fistula's.

XIV. *Cauda* in Cancer, in the sixth gives a Pleurisy: in Scorpio a Dropsy of the Belly; in Pisces a Dropsy of the whole Body; And in General *Cauda* in the Medium

Sum Coeli, shews improper and dangerous Physick, Distempers of the Reins, Back, Knees and Leggs; in the seventh, the Knavery of the Physician.

XV. The \oplus part of Fortune, called in Greek $\chi\lambda\eta\rho$ & $\tau\upsilon' \chi\eta\varsigma$, and in Latin, *Sors*, that is to say, the Lot or Chance; is a certain point signifying (as some think) an Universal Fortune or Fate.

XVI. Although some may ascribe it to the second house, yet, without doubt, it shall chiefly signify those things which that House signifies in which it is posited, and if so (as undoubtedly it doth) it will at one time or another manifest its Influence universally through all things concomitant with Humane life.

XVII. And so in the Ascendent its chief signification shall be of Life; in the second, of Substance; in the third, of Enemies: in the fourth, of Inheritances: in the fifth, of Pleasures: in the sixth, of Diseases, Servants; in the seventh, of Marriages and Enemies: in the eight of Legacies, in the ninth, of Arts; in the tenth,

or Honour and Trade: in the eleventh, of Gain; in the twelfth, of Imprisonment; and according to its position in all the Houses it shall also signify the parts of the Body those Houses govern.

XVIII. And so it shall have a double signification (but as aforesaid) first, being considered from the Ascendent of the Figure; secondly, as it may be considered from the Ascend. of the Matter.

XIX. In all of which there is to be taken special notice of its Lord, in what Sign and House of Heaven he is, how aspected and how dignified.

XX. The manner how to take it by night or day is thus;

First, find the Moons true place.

Secondly, the Suns true place.

Thirdly, subtract the Sun's place from the Moons.

To the remainder add the Cusp of the Ascendent.

The Sum is the true place of \oplus .

XXI. The *Antiscia* of Planets are altogether of the same nature with their Sextiles and Trines, and ought to be so considered.

CHAP. VII.

Of Compound Signification.

I. **H**itherto of Simple Signification; Compound follows, which is of the Planets, Signs and Houses.

II. Compound Signification of

the Planets is by accident; as being, first either Lords of such and such particular Houses; secondly, by being posited in such and such Houses; and so by this

this means such things shall be attributed to their Signification, as (*per se*) they are otherwise no ways capable of.

This we here speak in short, which else would require a Treatise alone.

III. Compound Signification

of the Signs, is first, in consideration of their being Angular, Succedent or Cadent, from any Sign of the Zodiack; secondly, as consideration is had to every Planets making his *Aries* in his own Houses, according to the following Table.

♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
♈	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
♉	♈	♊	♋	♌	♍	♎	♏	♐	♑	♒	♓
♊	♉	♈	♋	♌	♍	♎	♏	♐	♑	♒	♓
♋	♉	♊	♈	♌	♍	♎	♏	♐	♑	♒	♓
♌	♉	♊	♋	♈	♍	♎	♏	♐	♑	♒	♓
♍	♉	♊	♋	♌	♈	♎	♏	♐	♑	♒	♓
♎	♉	♊	♋	♌	♍	♈	♏	♐	♑	♒	♓
♏	♉	♊	♋	♌	♍	♎	♈	♐	♑	♒	♓
♐	♉	♊	♋	♌	♍	♎	♏	♈	♑	♒	♓
♑	♉	♊	♋	♌	♍	♎	♏	♐	♈	♒	♓
♒	♉	♊	♋	♌	♍	♎	♏	♐	♑	♈	♓
♓	♉	♊	♋	♌	♍	♎	♏	♐	♑	♒	♈

The Use of which is this: A man fell sick at such a time as his Significator was in ♈: suppose ♈: look in the table on the top for ♈, and in the first Column on the left hand for ♈: and in the common Angle you find ♈ and ♉, which signifies that he is afflicted at heart, and hath some stoppage in his Throat, &c. for every Planet in his own House governs the Head: in the second Sign to his House the Neck and Throat: in the third Sign the Arms and Shoulders, as the Table here inserted abundantly signifies.

IV. Compound Signification

of the Houses is understood from the Simple; for consider what every House signifies naturally from the Ascend. of the Figure; the same Significations shall be ascribed unto all the Houses, in the same order, from any of the Houses which shall be considered as the Ascendent.

Verbi gratiâ. The first House signifies Life, the second Estate, the third Brethren, the fourth Fathers, the fifth Children, the sixth Servants and Sicknes, the seventh Wives, the eighth Deceit, the ninth Strangers, the tenth Mothers, the eleventh Friends, the twelfth Enemies

ies and Witchcrafts. So, if the Patient be a Brother concerning whom the Question is asked, the third House shall be his Ascendant, the fourth shall signify his Estate, the eighth his Sickness (because it is the sixth from

the third) &c. the like is to be understood of the rest: but this note, that if any Urine be brought to you; the Ascendant of the Figure shall be the Patients own Ascendant.

CHAP. VIII.

When the Planets are Fortunes and Infortunes: when Strong and Weak.

I. A Planet is said to be a Fortune when he is conjoyned to the Fortunes, or beseiged of them or their beams, or in good Aspect of the Moon, or Lord of good Houses, or in *Cazimi*, or in mutual reception with other Significators, and essentially fortified, separated from an Infortune, and joyned to a Fortune; when he is Direct, swift in Course, increasing in Light, Number, and Motion.

II. A Planet is said to be an Infortune being conjoyned to the Infortunes, or beseiged of them or their Beams, or in evil Aspect of the Moon, or Lords of evil Houses, or Combust, or not received; when Perigrine, separated from a Fortune and joyned to an Infortune; when he is Retrograde, slow in Course, and decreasing in Light, Number and Motion.

III. A Planet is strong when

he is ascending in his *Excentrick*, swift in Course, not Combust, in an Angle or Succedent in his own Dignities, or Dignities of the Fortunes with Reception, Oriental (except *Mercury* and *Venus*) in the Day above the Earth, in the Night under, (except *Venus*, *Mercury* and the Moon.)

IV. A Planet is said to be weak if not received, or be slow of Course, or Perigrine, descending to the South Meridional, or in his *Excentrick*, or in *Via Combusta* (viz. the last 15 degrees of π and the first 15 of *Scorpio*) or joyned to a Planet Retrograde, Cadent, or otherwise Impeded, or in Aspect or Dignities of the Infortunes, or applying to Combustion, or Occidental (except *Venus* and *Mercury*) in the night above the Earth (except *Venus*, *Mercury*, and the Moon.)

V. For-

V. Fortunes in Diseases may become Infortunes, and contrariwise: viz. when the Disease is of the Nature of the Fortune, or of the nature of things by them signified; and in such case the Infortunes may be said to be Fortunes; for Contraries are often Cured by Contraries.

CHAP. IX.

Of Saturn through all the Signs.

I. *Saturn* is the general Significator of Melancholy Lassitudes, Weaknesses, Gouts, and Consumptions. Therefore,

II. *Saturn* in *Aries*, signifies melancholy vapours in the Head, watchings, and some cold there, in the Teeth, Deafness, or Noise in the Ears, Stoppage at Stomach, Destillations of Rheum, and Gout-like pains in the Arms and Shoulders: in *Leo*, some violent Grief at Heart, or Poyson, Malignity in the Secrets, Hecticks, Consumption or Wasting in the inward Parts or Reins, with Weaknesses in the Back, Vomiting and violent Burning and Pestilential Feavers, Piles pain in the Bowels, Cholick, Stone: in *♊*, Weaknesses of the extreame parts and Consumption, Pains in the Legs and Feet, violent pains of the Gout, Burning Feavers, Convulsions, Sciatica, old Aches.

III. *Saturn* in *Taurus*; the Kings Evil, or some old malign Sore, Quartan Agues, great Obstructions at Stomach, it may be the Scurvy, with a melancholy Dul-

ness at Heart: in *Virgo* a cold and dry Stomach, pain in the Sides, Stitches, Cholick, Wind, Gripping of the Guts, Melancholy, Grief, Sadness, Fearfulness, Consumptions, Sciatica, Quartans, Palxies, Stone in the Reins and Bladder, great Obstructions in the Bowels, and binding of the Body, a great Lassitude and Weakness in the Thighs and Extreame parts, Stoppage of Urine and the Stone: in *Capricorn*, signifies the Gout in the lower parts from Cold and Melancholy, Pain in the Head, and some great Obstructions there, Leprosies, Cancers, Scurf, Morpew, Quartans, Consumptions, Madness, Possession by the Devil, and many almost incurable Diseases.

IV. *Saturn* in *Gemini*, signifies Pains in the Arms and Shoulders, Pleurifies, Obstructions in the Bowels, Melancholy, Consumption, and Black Jaundice, Worms, and, Diseases of the Heart and Bowels: in *Libra*, Agues, a Consumption of the Body

Body, Weakness in the Back, Stranguria, Corruption of the Blood, the Sciatica and Gouts, Pains in the Knees, Melancholy, Frenzies, Apostumes, fluxes of the Blood, Hemorrhoids, cold Sweats, Feavers, Measles, small Pox, Pleurifies, Coughs, the Plague, Running of the Reins, Striches, &c. in *Aquarius*, Pain in the Head from Melancholy, Swellings or Struma's in the Throat, Pains and Distempers in the Joints, Defects in the Ears and Teeth, Melancholy blood, Flegm abounding, Breeding Feavers, small Pox, Measles, Cankers, Itch, Apostumes, French Pox, and such like; as also swellings of the Legs.

V. *Saturn* in *Cancer* signifies Obstructions of the Stomach, tedious Agues, Scurveys, Coughs and Colds, Phthicks and Ulcerations of the Lungs, Cancers and Ulcers in the Breasts, Pain and Weakness in the Back, Con-

sumptions with Universal Obstructions; Biles, Botches, Leprosies, Breakings out, Itch, Scurfs, Baldness, Cold and Watery Apostumes, Agues, Degenerating into a Dropsy or Jaundice, the Plague, &c. in *Scorpio* the Piles or Distempers in the Secrets, Melancholy, and Gout in the Legs and Feet, or some Obstruction of the Nerves, the Palsie, French Pox; Swine Pox, Fistula's, Apostumes, Agues, Tough Flegm, Plague, Pain in the Sides and Secrets, Buboës in the Groin, Stone in the Reins and Bladder, &c. in *Pisces*, the Gout in the Feet and Toes or Arms, Defluxions of Rheums, Consumption or Kings Evil, Diseases proceeding from wet in the Feet, Scurf, Morpew, Itch, Aches in the Bones, Fistula's, Mortification of Members, Dead Palsies, Falling-sickness, Dropsies.

CHAP. X.

Of Jupiter through all the Signs.

I. *Jupiter* is the general Significator of Scurveys, Surfeits, Pleurifies, Obstructions of the Liver and Stomach, with Corruption of Blood.

II. *Jupiter* in *Aries* signifies some Distemper with pain in the Head, or some Impostume; Quinsies, Stoppages in the Throat, and Strumeous Swel-

lings, Pleurifies, Faintings and Swoonings, Corruption of the Blood, Pimples, Itch, Scabs, Feavers, Heart Burnings, pain at Heart, Vomiting, strange Fancies and Imaginations; in Ω , a Feaver or bastard Pleurisy, Pain in the Guts, Gripping and Wind, as the Cholick; the Sciatica, or Hip Gout, pain in the

Thighs, Swoonings, Heart-burnings, Yellow Jaundice, Apostumes, Bloody Flux, but not dangerous, inflammations of the Blood : in ♀, Putrefaction of Blood and a Feaver proceeding of Choler : Pain in the Knees, with Breakings out thereabouts; Pains and Redness in the Head, Frensey, Madnes, Religious Fancies, Distempers of the Womb, Fury of the Womb, Vertigo, Rhumes, Apostumes in the Head and Ears, Oedema, Kings-Evil,

III. *Jupiter* in ♂ signifieth the Quinsy or Swelling in the Throat, the Running Gout in the Hands and Arms, Wind in the Blood; Obstructions in the Bowels with Pain and Gripings, Dryness of the Liver, Agues, affliction at Heart, sadness, Grief, and Diseases from Melancholy, Costiveness, Indigestion, Obstructions in the Guts : in ♀, Blood corrupted with Melancholy, cold and dry Liver, Obstructions of the Lungs, Consumptions, Weakness in the Back with Pain, and Feebleness of the Joynts; in Women, Fits of the Mother, Pain, Griping, and Obstructions in the Bowels, Oedema and Gout in the Knees, Obstructions, in the Kidnies : in ♀, Melancholy Blood, and Running Pains; some Obstruction or Stoppage in the Throat, a Bastard Quinsy, Tough Flegm in the Lungs, hard Tumours, Kings Evil, Coughs, Horseness, Asthma's, Swellings of the Amygdalæ, Uvula, & the Knees diseases.

IV. *Jupiter* in ♀, Blood abounds, a Pleurisie is really to

be feared with some Distempers the Reins, Apostumes from corrupted blood: Peripneumonia, Issue of Blood, Bloody Flux, Overflowing of the Terms, spitting of Blood : in ♀, Blood abounds much, which causes Obstructions, the Piles, and some Tumours neer the Groyn and Scrotums; as also Inflammations in the Legs, Feavers and Surfeits, Buboës, Apostumes from Corrupted Blood, Pleurisies, Obstructions of the Lungs, Overflowing of the Terms : in ♀, Running Pains over the whole Body, Hand, Arms, Legs and Feet, Corrupted Blood, Apostumes in the extreame parts, Pleurisie, Luxations of the Joynts, Fractures.

V. *Jupiter* in ♂ signifies a Surfeit, Scurvey or Dropsie, bad Appetite, Obstructions in the Bladder, Weakness and Faintness at Heart, Diseases in the Stomach, Womb and Privy Parts, continual Pissing, Pleurisies, Asthma's, Stitches in the left side, Worms in Children, Imposts in the Stomach, flux of Rheum upon the Lungs, the Stone : in ♀, the same, as also the Strangury, more especially the Piles, Cold taken at Feet, or the Sciatica, Pissing by Drops, Corruption of the Blood, Measles, Small Pox, Feavers, Putrefaction of Flegm, Swellings and Gouts in the Feet, Sciatica, Fistulas, Running Sores: in ♀, the Blood is Waterish, the Dropsie may be feared; Flegm abounds, the Stomach is stopped up almost, a Tympany appears, Swellings in the Face, and some dull kind of Pain in the Head, Rhumes, Indigestion, want of

Appetite, Quotidian Agues, Apostums in the Head and Feet,
Itch, Fistula's, Running Sores, Gout, and Distempers of the
Pains in the Sides, Tumours and Brain.

CHAP. XI.

Of Mars through all the Signs.

I. **MARS** is the general Significator of Plagues, violent Feavers, Megrims, Yellow Jaundice, Wounds, Old Sores, Inflammations and Fluxes, Headachs, Frenzies, Madness, Tertian Agues, Imposthumes, Megrims, Tetters, Ring-worms, Anthony's fire, Stone, *Noli me tangere*, Abortion, &c.

II. *Mars* in γ , Extreame Pain in the Head, hot and dry, almost frantick or mad, with want of Sleep, or hot Rheums in the Eyes, and Imposthumes in the Head; violent Pains and Gripings in the Bowels, hot and dry Diseases, proceeding from yellow Choller, Feavers, Lunacy, Itch, Jaundice, the Chollick and Stone, pimples in the face, redness of the Eyes, Shingles. In α , Choller abounds, with a violent Feaver; a fore Pain at Heart, with some pains in the Kidneys and Knees, malign Diseases, Plague or Pestilence, great thirst, yellow Jaundice, Obstructions of the Liver, pain at heart, Trembling, Fainting and Swooning fits. In π , the Sciatica, or some old Sore in the Hips or Thighs, Driness in the Mouth, extreame Heat and

Soreness of the Throat, violent pain in the Head, Heat, Dryness and Inflammation of the Jaws, Almonds and Pallat, Burning and Pestilential Feavers, Carbuncles, eating sores, Cankers, Chollerick Apostums, Hecticks, Sciatica, Stranguria.

III. *Mars* in δ signifies some Tumour on the Neck, Throat or Wind pipe, Weakness and Pain in the Back, the Stone in the Reins, or a wasting there, Kings-eil, Hecticks, Consumptions, Melancholy, Frenzy, Cramps, Gravel, Obstructions of the Liver and Spleen. In μ , gives often a Bloody Flux and Chollick, yet sometimes Obstructions; some Erysipelofus Humour on the Legs, Piles, Strangury, Wind, Stone in the Reins and Bladder, Tympany. In ν , hot and violent Pains in the Knees with Lameness, as also in the Hands and Arms, with hot Swellings sometimes, and the Running Gout, Consumptions, shrinking of the Sinews and Leprosy.

IV. *Mars* in Π signifies oftentimes the Itch, and Breakings out; as also Pain in the Arms, Heat of Blood, with Putrifi-

on, and some Soreness or Distemper in the Secrets, the Stranguria, Shingles, Tettars, Ring-worms, Scabs, Feavers, Apostumes, Piles, running of the Reins, &c. In α , the Stone in the Reins, and violent pains there, Feavers, &c. with some Distempers in the Feet; the French-Pox and Gonorrhœa may well be feared, Pestilent Feavers, Carbuncles, Meazles, Small-Pox, Corruption of the Blood, Apostumes, Tettars, Ring-worms, Fluxes, scalding of the Urine. In β , Putrifaction and Inflammation of the Blood, Swellings in the Legs, some Surfeit, Obstruction at Stomach, Pleurisie or Feaver, Apostumes, Kings-evil, Carbuncles, weakness of the Stomach, Fainting, Trembling, Stitches, Measles, Scurvy.

V. Mars in \S signifies a Pleurisy or gathering of sharp Hu-

mours into the Stomach, some Cholerick Tumour in the Thighs, Biles, Botches, Leprosy, Itch, Scurff, Morpew, Salt Flegm, and water, Coughs, Rhumes, Wind and Flegmatick matter. In \mathfrak{M} , the French Disease, Stone, the Small Pox, the Scurvy, Dropsy, or any great Surfeit, Sores in the Privities, violent Pains in Head, Rheum in the Eyes and Megrin, and in a Woman her Courses overflow, Scabs, Itch, Pimples, Distempers of the Womb and Privy parts, Nocturnal pains, Aches in the Bones, stoppage of Urine, small Pox, Headach, Vertigo, Apoplexy: in \mathfrak{X} , Lameness in the Feet, with Pain there, Illness, Faintings and some Distempers of the Heart, Feavers from Salt Flegm, Dropsy, Palsy, Gout, Heart-Burnings, &c.

CHAP. XII.

Of Sol through all the Signs.

SOL signifies generally Passions of the Heart, Swoonings, Cholerick Breakings out, Weakness of the Sight, and Burning Feavers, Scabs, Itch, Fluxes, Yellow-Jaundice.

II. Sol in γ signifies the Megrin, Restlessness, Sore Eyes, and some Pain or Swelling in the Thighs or Hips, Head-ach, Pimples in the Face, Yellowness

in the Eyes, Inflammations and Feavers, Sciatica: in δ , the Plague or spotted Feaver, Stone in the Reins, Swoonings and Faintings, with more than ordinary Pains in the Head to Raving and Madness, Frenzy, Vertigo, Megrin, Yellow Jaundice, heat of the Liver, Vomiting, Faintness, Weakness, Pain at Heart and Back: in ϵ , some Cho-

Cholerick Humour in the Thighs or Hips, or Fistula there, or Swooning, or Feaver, and some more than ordinary Sickness at Heart, Heart burnings, Plague, Jaundice, &c.

III. *Sol* in γ , signifies danger of a Quinsey or Sore Throat, and some pain or Tumour of Choler in the Knees, Oedema, Nodes in the Shins, Itch, Borches, Swellings of the Almonds, Kings evil, Stiffness of the Sinews, Colds, Coughs, Rheums, &c. in η , the Bloody Flux or Cholerick, Obstructions in the Stomach and Throat, or some Swelling there, Kings-Evil, Cramps, Convulsions, pain in the Bowels, Feavers, Measles, Small-Pox, Quinsey, Swellings of the Almonds and Pallet, *Noli me tangere*. in ψ , Lameness, in the Knees, or some Distemper in the Bowels, with a Feaver, Flux of the Bowels, Cramps, Palsies, Cholick, Stone, Measles, Feavers, Pox, Aches in the Bones, Nodes, Oedema.

IV. *Sol* in Π signifies Itchy or Scorbutick breakings out in the Body, Corruption of the Blood, and Pestilential Feavers, with Weakness or Lameness in the Leggs; Scabs, Pimples, Borches, Stoppage of the Terms, Wind, Running Gout, Nodes in the Shins: in \approx Choler abounds, Pain in the Reins, Stone and Sharpness of Urine, Universal Corruption and Inflammation of Blood, with Pains in the Arms,

Shoulders and Extreame parts, the Jaundice, Running Gout, Inflammation of the Humours, Breakings out in the extreame parts; Kings-Evil, Fistula's: in \approx , Lameness and Breakings out in Legs, Difficulty of Pissing, and Waiting of the Reins, Apostumes, Stone and Gravel in the Reins or Bladder, Gonorrhœa, Scaldings of the Urine, Green-sickness stoppage of the Terms,

V. *Sol* in \S signifies a Pleurisy, Hoarseness of the Voyce, the Small Pox and Measles, with a kind of Hydropsy in the Legs and Feet, Kings-Evil, Oedema, Gout, Fistula's, Running Sores, pains in the Sides, Rickets, Weakness of the Joynts, indigestion, and want of Appetite: in \mathcal{M} , great Suspicion of the French-Pox; in Women, their Courses overflow, some Distemper in the Secret parts, with some Grand Obstruction at Stomach, Dropsy, Palsy, Green-sickness, Fainting, Weakness of the Stomach, Vomiting, Obstructions of the Liver, Coughs, Asthma's, Rotten Feavers, Surfeits, Pleurifies, pain at Stomach, Impostumes there, Stone, Gravel, Running of the Reins: in \mathcal{H} , the same with the former, as also the Stranguria, Disury, and extreame Pain in the Secrets, Gonorrhœa, Dropsy, Agues, Palsies, Diseases in the Privy parts, Sores and Ulcers there, flux of the Terms, Saltness of humors.

CHAP. XIII.

Of Venus through all the Signs.

I. *VENUS* generally signifies Fits of the Mother, Womens Courses, Diseases in Generation, the Gonorrhæa and French Pox.

II. *Venus* in γ signifies Heaviness and Dulness of the Head proceeding of Cold, and gives danger of Lethargies, &c. as also some Distemper in the Reins proceeding from a Venereal Cause, Pain and Cold gotten at Feet, Jaundice, Itch, Whites, Running of the Reins, Gouts and Pains of the Joynts and Toes: in Ω , causeth some Love Passions, with some Obstruction at Stomach, and Pain or Swelling in the Legs, pain at the Stomach, Green-sickness, Obstructions of the Terms, Rickets, Fits of the Mother, Faintings, Rhumes, Jaundice, Feavers, Apostumes, want of Appetite, ill Digestion, Vomiting, Small Pox, Measles: in π , the Sciatica, or some old Sore thereabouts, Corruption of Blood, Surfeits and some danger of a Clap; Distempers of the Secret parts, Running of the Reins, Whites, Piles, Fistula in Ano, Tumours in the Cods, Hernia Carnosa, Ruptures Running Gout.

III. *Venus* in δ signifies a Cararrh or some Tumour in the Throat, Pains in the Head, Colds, and some Distemper in

the Secret parts, Swelling of the Almonds and Uvula, Head-ach, Running of the Reins, and Diseases from Cold and Moisture: in μ , the Worms, Loosness or some Flux, Pains at Heart, or some Illness taken from Cold in the Feet, Fainting, Swooning, Illiack Passion, Cholick, Gripping of the Guts, Stoppage of the Terms, Wind, Stranguria, Gout, Rhumes, Cararrhs, &c. in ν , Oedema in the Knees or Thighs, or some such Swelling, there proceeding from Cold, also Rawness at Stomach, Melancholy, Pains and Aches in the Joynts, the Gout, Sciatica, Green-sickness, Rickets, stoppage of the Terms, Worms, Faintness, Vomiting, want of Appetite.

IV. *Venus* in Π gives Corrupt Cold and Watery Blood, the Kings Evil, and some Distillation of Rheum from the Head, afflicting the Extream parts, Rheums, Quinsies, Asthma's, Coughs, Pleurisies, Surfeits, Corruption of the Blood, Scurvy, Running Gout: in ω , a Surfeit, or Gonorrhæa, and Weakness of the Reins, the Diabetes, Pain in the Bowels and Head, with Wind, Putrefaction of Blood and Humours, Fluxes, Gripping of the Guts, Cholick, Illiack Passion, Stone in the Reins, Head-ach, Megrim, Vertigo, Epilepsy, Lethargy, Stranguria,

guria, Faintness, pain in the Back, Gout: in α , Oedematosus Tumor in the Legs, and Knees, or some pain and affliction at Heart, Swooning Fits, Fits of the Mother, Dropsies, Kings-Evil, Flegm and Diseases thence proceeding, Pain in the Legs, Apostum's, Stitches in the Sides, Pleurifies.

V. Venus in \S , ill Digestion, Loss of Appetite, a real Surfeit, with Vomiting, an Universal Corruption of Blood, and pains in the Extreame parts, Dropsies, Oedema, Gout and Running Gout, Pains and Aches in the Arms, Shoulders and Leggs, Palsies, Weakness of the Sto-

mach, Faintness, Vomiting and want of Appetite, Ap. Stumes, pains in the Sides, &c. in \mathbb{M} , the Dropsy, Scurvey, French Pox, Running of the Reins and Kings Evil, stoppage of Urine, stone in the Reins, Quinsy, Sore Throat, Swellings in the Almonds and Paller, Catarrhs or Rhums, Coughs, Asthma's, Phthisicks: in \mathbb{X} , Cold, taken at the Feet, with Lameness, White Swellings in the Legs, and a Flux with Wind and Looseness in the Bowels, Cholick, Gripping of the Guts, Dropsy, Quoridian Agues, Lameness, Gouts in the Leggs and Feet, Aches in the Bones and Joynts by venomous humors.

CHAP. XIV.

Of Mercury through all the Signs.

I. **M**ercury signifies generally Lethargies; Vertigo's, Loss of Memory, Hoarseness of the Throat, with Madness or Frensey.

II. Mercury in γ signifies a Vertigo, or Lightness in the Head, with Distempers of the Womb, and Wind thence arising, Melancholy, Stone and Gravel, Weakness of the Limbs, Consumptions, Distemper of the Mind, with horrible and fearful Thoughts, Catarrhs, Itch, Gout: in Ω , Melancholy at Heart,

Tremblings there, and Pain in the Back, Cold gotten at Feet, with Lameness in the Arms, and other the Extreame parts, Faintings, Swoonings, Pains and Aches in the Shoulders, Arms, Leggs and Feet, Gouts, Weakness of the Sinews, Weakness of the Stomach, Vomiting and want of Appetite, small Pox, pain at Heart and in the Sides: in \mathbb{X} , Pains in the Reins, Weakness of the Back, Coughs, with Stoppage at Stomach, Stone and Gravel in the Reins, Pleurifies, Obstru-

ctions at Stomach, Green-sickness, Fits of the Mother, Stoppage of Urine and of the Courses, Consumption of the Radical humidity, Gripping of the Guts.

III. *Mercury* in γ signifies Distillations in the Throat and Wheefings, the Sciatica, or some Lameness or Numbness or Gout in the Feet, Quinsies, Swellings of the Amygdala's, Quartan Agues, Kings-Evil, Oedema; Lameness in the Knees and Hipps, the Sciatica, pains and Nodes in the Shins, Melancholy: in μ , Wind in the Bowels, the Cholick, Shortness of Breath, Obstructions at Stomach, Pain in the Head, Gripping of the Guts, oppression at Stomach, with weakness thereof, indigestion Vomiting and want of Appetite, Megrim, Vertigo, Madness, or Frenzy, Lethargy, Falling-sickness, Palsy, Dead Palsy, Apoplexy: in ν , the Gout in the Knees, Stoppage of Urine, or some affliction at heart proceeding of Melancholy, Stone in the Reins or Bladder, Ulcers in the Secret parts, Suffocation of the Womb; Shrinking of the Sinews, Wind, Running of the Reins, the Whites, sickness of the Stomach, Pain and affliction there, stoppage of the Terms, Vomiting, &c.

IV. *Mercury* in II. Windiness of the Blood, some Weakness in the Arms, Pain in the Head, and Pains of the Gout, Corruption and Putrefaction of the Humors, Rhumatisms, Gout in the Knees, Melancholy, Fancies in the Head and Brain, a disturbed Mind, Apostumes in the Head

and Ears, Fearfulness: in π , pain and Weakness in the Reins, Stoppage of Urine, Faintings at Heart, Obstructions in the Throat and Lungs with Flegm, or some Phlegmatick Swelling in the Breast, the Kings-Evil, or Tumours in the Throat, Quinsies, Swellings in the Almonds and Paller, Apostumes there. Tremblings of the Heart and Fearfulness, Greensickness, Strangury, Stone: in ρ , Fluxes and Wind in the Bowels, Running pains in all the extream parts of the Body, Gripping of the Guts, the Cholick, and sometimes exceeding Costiveness, Corruption of the Blood, Surteits, Sciatica, pain in the Thighs, and Leggs, Apostumes, Suffocation of the Womb, Gout.

V. *Mercury* in σ signifies Coldness of the Stomach, Gripings with Wind there, Distillations of Cold Rheum, or some Cough, with Lameness in the Legs, Greensickness, fits of the Mother, stoppage of the Terms, Quinsies, Coughs, Colds, Asthma's, Swellings of the Almonds, and Paller, Kings-Evil, Catarrhs, Rising of the Lights, (as it is called) straightness of the Wind-Pipe: in τ , signifies an Ague proceeding of Cold. Pain and Flux of the Bowels, Soreness in the Secrets, and some Running pains in the Arms and Shoulders, Running of the Reins, Whites Overflowing or stoppage of the Terms, fits of the Mother, Gripping of the Guts, Worms, Running Gout, Distemper of the Womb, Barrenness: in χ , a Gonorrhœa or Weakness and Lascitude,

stitude of the Reins, with Running pains or Soreness in the Knees, Legs or Feet, the Stone and Gravel, pain of the Back,

Oedema, Dropsy, Gout in the Knees, Ankles and Toes, stoppage of Urine, Strangury.

CHAP. XV.

Of the Moon through all the Signs.

I. **L**UNA generally signifieth the Falling-sickness, Womens Courses, Convulsions, Loosness, Dropsies, Surfeits, Coughs, Diseases of the Eye and Apostumes.

II. Luna in γ signifies some Effluxions of Rheum from the Head, Falling-Sickness, Convulsions, Dimness of Sight, with some Cold there, Sleepiness, with some Pain or Lameness in the Knees, Apoplexy, Lethargy, Aches and Pains through Cold, Gout, Running Gout, Oedema, Frensy, and sometimes Madness, Redness and Deformity of the Face, Sore-Eyes: in δ , Sickness at Heart, the Kings evil or some Distemper in the Throat, Quinsies, Swellings of the Almonds and Paller or Jaws, the Yellow-Jaundice, Carbuncles, Shingles, St. Anthony's Fire, Itch, Feavers, &c. in π , some Weakness or Lameness in the Thighs. Pain in the Bowels or Wind Cholick, Cankers, Red Faces, Aches, Gouts and *Noli me tangere*, Fluxes, Gripping of the Guts.

III. Luna in σ signifies Struma's, Swelling and Soreness of

the Throat, with Pains in the Legs and Feet, Quinsies, Swellings of the Almonds, Coughs, Stoppage of the Breath through thick Flegm, Agues, Cramps, Aches, Pains in the Legs: in μ , Obstructions in the Bowels, Melancholy Blood, and Weakness of the Extream parts, the Running Gout, Distempers in the Arms and Shoulders, Apostumes, Wind, and Gripping of the Guts, or such like: in ψ , the Gout in the Knees, Pain in the Reins, Stone there, Weakness of the Back, or the Whites in Women, Running of the Reins in Men, Stoppage of Urine, Strangury, Consumption, Hard Tumours and Cankers.

IV. Luna in Π signifies the Running Gout in the Hands, Arms, Shoulders, Legs and Feet. Corruption and Putrifaction of the Blood, Measles, Small Pox, Coughs and Colds, taken by wet in the Feet, Oedema: in ϵ , Distemper in the Reins, pain in the Back, Whites in Women, a Surfeit or some Obstruction at Stomach, Pain and Weakness at Stomach, Vomiting, want of Appetite.

tite, indigestion, Stitches, a Pleurisy, Pimples and Breakings out : in ∞ , Pains in the Legs, Fits of the Mother, the Diabetes, and Weakness or Soreness in the Instruments of Generation, Whites in Women, Running of the Reins, French-Pox, Agues, Dropsies, Diseases of the Bladder, Continual Pissing, Worms, Lasks.

V. *Luna*, in \S , great Stoppage at Stomach, Small-Pox, a Surfeit, the Dropsie Timpanites, Falling-sickness or Convulsions, Megrim, Vertigo, Lethargy, Apoplexy, Head-ach, Palsy, Sleepiness, Vomiting want of Appe-

tite, Indigestion, Pleurisy : in \mathcal{M} , Diseases in the Secrets, the Dropsy, Ascites, and Anasarca, Poyson, the Small-Pox, Swoonings and Affections of the Heart, Fainting, Illness and Pain at Heart, Weakness in the Back, Running of the Reins, Whites, Ulcers in the Privities, Apostums, Fistula's, French-Pox : in \mathcal{K} , Dropsie or some Dangerous Cold taken at Feet, with watery Swellings in the Thighs, and Legs, and an Universal Flegmatick Constitution of the whole Body, Oedema, Gout and Running Gout, Fistula's, and sometimes violent Coughs.

CHAP. XVI.

Of the Moons affliction in the Fiery Trygon.

I. **THE** *Moon* in *Aries*, at the Decumbiture afflicted by the σ \square or ρ of h , the Disease proceeds from a cold Cause, with Heaviness of the Head, Weakness or Dullness of the Eyes, Distillation of Rheum into the Breast, Stoppage of the Throat or Wind-pipe with Phlegm, outwardly shivering with Cold, loathing in the Stomach, or Swoonings and irregular Sweatings.

The Disease proceeds of Cholera and Melancholy, Rages chiefly by Night ; the inward parts

are exceeding Hot, the outward Quake with Cold, accompanied with Fainting Fits, Swooning in the Night, loss of Appetite, as also a weak and inordinate Pulse.

II. The *Moon* in *Aries* afflicted by σ \square ρ of σ causes Grief to proceed from the Brain, with continual Feavers, Restless, the Mouth Extreame hot dry and thirsty, an Inflammation of the Liver, with Dryness in the Breast ; a Frensey in this case may be feared.

The Disease proceeds of red

or yellow Choler, the Sick cannot Rest or Sleep, having a continual Fever, extream Head-ach, high and inordinate Pulse: if ☉ and ☿ afflict the ☽ at the same time, 'tis a violent Fever and Frensey.

III. The Moon in *Leo* afflicted by *Saturn* signifies a violent Fever, overflowing of the Blood, Heat and Dryness in the Stomach, with great Burning inward and outward.

The Disease proceeds of Blood, with Violent heat and a troubled Pulse; it often signifies the Jaundice, especially if ☉ has any thing to do in the matter.

IV. The Moon in *Leo*, afflicted by *Mars*, gives much Blood, causing violent Fevers; Weak Pulses, strong Madness or Frensey, no Appetite, Heaviness of the whole Body, Drowsiness, Sickness at Heart, and many times Consumptions.

The Disease proceeds of adust Blood, with loss of Appetite, Languishing and Swooning Fits, Weakness and great heat.

V. The Moon in *Sagitary* afflicted by *Saturn*, signifies a De-
fluxion of thin sharp and subtil

Humours, Pain in the Joynts and Arteries, danger of a Fever by Extremities of Heat and Cold; sometimes with Violence.

The Disease comes of Acid Flegm, and corrupted Choller, accompanied with horror, fear, and Cold: the ☽ here signifies also the Sciatica.

VI. The Moon in *Sagitary* afflicted by *Mars* sheweth a desperate Sickness from Gluttony, Drunkenness, Surfeiting or overmuch Repletion, high Fevers coming of Choler, with Flux of the Belly.

The Disease comes of Blood and red Choller, having a remiss and Weak Pulse.

VII. The Moon in *Aries* afflicted by *Saturn* and *Mars*.

The Disease proceeds of Choler, mixt with tough Flegm.

The Moon in *Leo* afflicted by both *Saturn* and *Mars*.

The Disease proceeds of Green Choller.

The Moon in *Sagitary* afflicted by both *Saturn* and *Mars*.

The Disease proceeds of Yellow Choller.

CHAP.

CHAP. XVII.

Of the Moons affliction in the Earthy Trygon.

I. **T**HE Moon in *Taurus* afflicted by *Saturn* sheweth the Disease proceedeth from Wantonness, Drinking, Surfeits, or too much Repletion, causing Feavers proceeding from burnt Choler and Obstructions of the Arteries, with Inflammation of the whole Body, and Exulceration of the Lungs.

The Disease comes of Melancholy, and the Pulse is high and inordinate.

II. The Moon in *Taurus* afflicted by *Mars* sheweth a Quinsy, or a Disease proceeding of too much ill Blood, with Continual Feavers, the whole Body Obstructed, Inflammations of the Neck, Throat and hinder parts of the Head, Ach of the Bones, inordinate Watching, with Desires to drink Cool things.

The Disease comes of Choler and Sweet Flegm: if both ♀ and ♂ afflict the ♀, it is a Quartan, Gout, Dropsy, Spleen or other Disease coming of Cold.

III. The Moon in *Virgo* afflicted by *Saturn* causeth a Distemper from Crudities, and evil Digestion of the Stomach; Flegm doth obstruct the Bowels and Intestines, Head-ach, danger of a

Bastard Pleurisie and some inordinate Feaver.

The Disease comes of viscous tough Flegm, and cold taken. The Sick is bound in Body, and there is the Cholick and Illack Passion.

IV. The ♀ in ♍ afflicted by ♂ signifies Exulceration of the Intestines, Bloody Flux, Feaver, bad Stomach, loathing of Meat, reaching to Vomit.

The Disease proceeds of Salt Flegm, Fretting Humors: the Pulses are slow and thick, and there is a Vomiting, want of Appetite and Loathing of Meat.

V. The Moon in *Capricorn* afflicted by *Saturn* shews Cold, subtil and thin Distillations, Pain and Obstructions at Breast, a little Heat at sometimes, with a violent Cold or Cough, and Difficulty of Breathing.

The Disease comes of Melancholy, with an Oppression of the Lungs and Spleen: the Cough oppresses most at Night, with an intense Feaver; there may be also an Oedema upon one of the Knees.

VI. The Moon in *Capricorn* afflicted by *Mars* shews reachings to Vomit, from evil Digestion or some cholerick or melancholy Mat-

Matter, a bad Stomach, Tumour of the Nerves; cholerick Humours offend the Joynts with Ulceration, as also a Flux of the Belly.

The Disease proceeds of cholerick Matter, There is a continual Feaver, with Loathing, inflammation of the Breast, Exulceration of the Intestines, and

much Pain in the Sinews and Joynts.

VII. *Luna* in γ afflicted by η and σ , shews the Disease comes of adust Melancholy: in μ , afflicted by them both, the Disease comes of Salt and Sower Flegm: in ν , afflicted by them both, the Disease proceeds of Melancholy adust.

CHAP. XVIII.

Of the Moons affliction in the Airy Trygon.

I. **T**he Moon in *Gemini* afflicted by *Saturn* shews the Disease proceeds from Disturbance of the Mind, by overcharging it with too much Care, or by some Weariness in Travel, or much Watchings, a small Feaver, Pain all over the Body, but most in the Joynts and Arteries, Sweating, Pain of the Spleen, and inclining to a Consumption.

The Grief proceeds of Choller and Flegm, and torments most by Night, with Sweating, Pain of the Spleen, soft Pulse and slow, and a Defluxion of humors into the Arms and Legs.

II. The Moon in *Gemini* afflicted by σ signifies a violent

and dangerous Feaver, great Obstructions, very irregular, and high Pulses, with Sickness at Heart.

The Disease proceeds of Blood and red Choller from Drinking of much Wine or Strong Drink, the Feaver will be continual with a violent Burning.

III. The Moon in *Libra* afflicted by *Saturn* signifies the Disease to proceed from Drunkenness, Gluttony and Surfeiting (or too much Venery) Pains in the Breast, Stomach and Head, want of Appetite, Loathing of Meat, nocturnal Feavers, Hoarseness, Coughs and Distillation of Rheum.

The Disease proceeds of too much Blood, mixt with Melancholy, having a Weakness of the Stomach, Loathing, and Vomiting.

ting, the Pulses sometimes high, sometimes more remiss; there is also the Stone in the Reins and Bladder, and Distemper in the Womb and Secrets.

IV. The Moon in *Libra* afflicted by *Mars* signifies too great a Quantity of Blood, causing intense Fevers, with high Pulses, Watching and Inflammation of the whole Body.

The Disease proceeds of Blood and Choller together, with Defluxions of Humors, Swelling of the Legs and Feet, and a disturbed Fancy, as also Gravel in the Reins or Bladder.

V. The Moon in *Aquary* afflicted by *Saturn* shews the Disease is from much Labour, Weariness, or Watching, or for want of needful Refreshment, taking the Sick unequally with remission and vehemency.

The Disease comes of yellow Choller mixt with Coagulated

Flegm: there is an universal Weakness of the Stomach and whole Body, with Distemper of the Head, through Melancholy, Cramps, Convulsion or a Dropsy.

VI. The Moon in *Aquary* afflicted by *Mars* shews a Disease proceeding from a sharp and violent Cause, taking the Sick with hot and vehement Passions.

The Disease comes of Red Choller and Blood adust; the Sick is often troubled with the Feaver *Causos*, as also a Tertian, or a Quartan.

VII. Luna in Π afflicted by both \hbar and σ , the Disease comes of Choller mixt with Coagulated Flegm: in α afflicted of both \hbar and σ , the Disease comes of Blood mixt with Choller: in α afflicted by both \hbar and σ , the Disease proceeds, of blood mixt with Burnt Choller, or Melancholy.

CHAP. XIX.

Of the Moons affliction in the Watery Trygon.

I. The Δ in \S afflicted of \hbar shews an Extream Cold taken, and that joyned with much Melancholy or flegmatick Matter, causing Destillations upon the Breast and Lungs, abundance of Moysture, Catarrhs, Feavers, Hoarseness and Obstructions.

The Disease proceeds of Flegm and Water, sitting up late at Study, too much Drinking, or such like; the Pulse is soft and slow, and it is commonly a Quotidian Ague, Dropsy, Surfeit, Scurvy, or Apostumation.

II. The Δ in \S afflicted of σ shews

shews a Surfeit, overflowing of the Blood, Flegm in the Stomach with Reaching to Vomit. The Disease comes of Blood mixt with Water or Sweet Flegm, and a general Putrefaction of humors.

III. The ♀ in ♀ afflicted by shews Bubo's, or Exulcerations in or neer the Secrets, the Piles in Ano; and some Obstruction of the Urine.

The Disease comes of tough putrified Flegm, or from a violent and virulent Gonorrhœa, Venomous Whites, with a general Putrefaction of humors, there may be also the Stone in the Bladder or Reins.

IV. The ♀ in ♀ afflicted by shews violent Pains in the Head, Exulceration or Impostumation in the Secrets, the Gonorrhœa, Pox, Hemorrhoids, Measles, Small Pox or Pestilence.

The Disease comes of Corrupted Blood and Salt Flegm and break out into Scabs, Itch, Mange, Scurff, Leprosy, Bitches, Boyls, or such like; Issue of Melancholy Blood at the Fundament.

V. The ♀ in ♀ afflicted by shews the Distemper is caused from cold Distillations of Rheum, the Sick is troubled with a continual Fever, Sighings, and Pain under the Ribs, Extension of the Precordiack and Heart-strings.

The Disease comes of Flegm mixt with coagulated Melancholy: The Disease most afflicting is a tedious Quartan, accompanied with an exceeding or rigorous cold or Shivering, the Gout, and *Noli me tangere* or Polypus.

VI. The ♀ in ♀ afflicted by shews Plenitude of gross Humours, caused by Drunkenness, Gluttony, or much Repletion: the Sick is most troubled in the Night, a Frensey or Madness follows, sharp Feavers, and vehement Thirst.

The Disease arises from Choler mixt with sweet Flegm; There is nocturnal Pains, Headach, Raving, Frensey, and sometimes Madness, Gout in the Feet, *Ignis sacer*, or *S. Anthony's Fire*.

VII. Luna in ♀ afflicted by both ♀ and ♂, the Disease proceeds from Yellow Choler: in ♀, afflicted by both ♀ and ♂, the Disease proceeds of great Putrification of Humors, as in the Leprosy, Small-Pox, Measles, spotted Fever: in ♀ afflicted by both ♀ and ♂, the Disease proceeds of Yellow Choler mixt with tough congealed Flegm.

Thus have we in the four last preceeding Chapters, expressed (in few words) the Diagnostick of Hermes: which are also to be understood of the ♀ being in like manner afflicted by ♀ as by ♀, and by ☉ as by ♂, with very little variation.

CHAP. XX.

Of the Significators.

I. Significators are either special or general.

II. Special Significators of the Sick are his Asc. Planets posited therein, its Lord, and the Moon.

III. Special Significators of the Sickness are the sixth House, Planets posited therein, & its Lord: to which some adjoyn the XII house, Planets therein, and its Lord.

IV. Special Significators of the Physician are the seventh House, Planets posited therein, and its Lord: of the Medicine, the tenth House, Planets therein, and its Lord.

V. Special Significators of Death are the eighth House, Planets therein, and its Lord: of the End of the Matter or the

Grave, the fourth House, Planets therein, and its Lord.

VI. General Significators of all the afore said things are of the Ascendent, *Saturn* and *Mars*: of the fourth, *Luna* and *Sol*: of the sixth House *Mercury*: of the seventh, *Venus* and *Luna*: of the eighth, *Mars* and *Saturn*: of the tenth, *Saturn* and *Mars*: of the twelfth, *Jupiter* and *Venus*: these being the Consignificators of each House.

VII. Lastly, In all that which we have already spoken, or may speak hereafter of Significators specially considered; the same Judgment you must understand, and apply to them which are in General. See Ch. 7. foregoing.

CHAP. XXI.

Of the Signification of the Planets by Position in the Houses of Heaven.

I. **O**bserve what Sign ascends, the Lord thereof, and in what Sign he is posited; for the Ascendent signifies the Head, and sheweth the Temperament;

as also the Disposition of the Brain, shewing whether the Disease lyeth chiefly in the Body or Mind.

II. *Saturn* in the Ascendent
not

not being Lord thereof, and chief Significator of the Disease, the Sick is troubled in the Head with melancholy Vapours, speaks little, having either a noise in his Ears, or stoppings of his Head and Nose, with a great Cold and disturbed Fancy.

III. *Jupiter* in the Ascendent, chief Significator of the Disease, shews the Head afflicted by Blood, Heat and Moisture flowing thither, with some small Inflammation and an intense Fever or pain.

IV. *Mars* in the Ascendent, chief Author of the Disease, disturbs the Head with Cholerick Humours, troubled Brain, unquiet Sleep, extream Pain, Fever, Frensy or Madness exceedingly afflicts the Mind, and upper parts.

V. *Sol* in the Ascendent, Author of the Disease, shews Cataracts, Soreness and Inflammations in the Eyes, extream pain in the Head, Watching and a violent Fever.

VI. *Venus* in the Ascendent, Author of the Disease, shews cold, Rheum in the Head and Eyes, Moistness of the Brain, some Deformity in the Face, it may be loss of a Nose.

VII. *Mercury* in the Ascendent, Author of the Disease, shews the Head is ill with Cold

and Wind, occasioning Catarrhs; Hoarseness, and Coughs, the Brain is afflicted with Lightness and Vertigo's.

VIII. *Luna* in the Ascendent, Author of the Disease, shews Convulsions, Apoplexies, the Falling-sickness, Coma, Carus, and Lethargies, from Cold and Moisture.

IX. The Dragons Head afflicts not, the Tail there gives foolish Fancies, and Suspicion of the Disease, as that it might come through business.

X. *Part of Fortune*, in the Ascendent not afflicted, shews a mild Disease: but in this case you ought to consider its Lord.

XI. Lastly, you are to consider what every House signifies (by *Ch. 3. Sec. 1.* and *Ch. 7. Sec. 5.*) and according to the position of the Significator of the Disease in the same, you must give Judgment (in like manner as before in the Ascendent) and so pronounce that part of the Body afflicted which the same House shall represent.

Only one thing you must here note, that you have not barely respect to the House, but also to the Nature and Quality of the Sign in which the said Significator is posited.

CHAP. XXII.

Whether the Party be sick or no, of whom the Question is propounded.

I. IF the Ascendent or his Lord be not afflicted, or out of his Essential Dignities, or in ♂ of any fixed Star of the Nature of the Lords of the fourth, sixth, eighth, or twelfth, the Party is not sick.

II. Or, if the sixth House be not afflicted by the presence of an evil Planet, but if *Sol* be there, the *Moon* free from affliction, and not in the sixth, eighth, or twelfth Houses, he is not sick.

III. If *Luna*, *Jupiter*, *Venus* or *Caput* be in the Ascendent (not being Lords of Evil Houses) or the Lord of the Ascendent in *Sextile* or *Trine* of *Jupiter* and *Venus*, or they casting their *Sextile* or *Trine* to the Ascendent, or sixth, he is not sick, but it is some Fear or Mistrust upon the the agitation of the Humours.

IV. If the Lord of the Ascendent be in a Sign contrary to his own Nature, or Cadent, chiefly in the sixth, or afflicted, the Party is sick.

V. Or, a Diurnal Planet under the Earth, ill affected, weak, combust, retrograde, in his fall or detriment, or besieged of the Infortunes, or with

violent fixed Stars, the Party is sick, and contrariwise of a Nocturnal.

VI. If any fixed Stars of the the Nature of the Lord of the sixth House ascend, or be with the Lord thereof in a bad House (especially being malevolent by Nature) they shew the Party of whom the matter is propounded is sick.

VII. If there be no Planet found in any of the 4 Angles, or within 5 or 10 Degrees of the same, the party is not sick, but free from any Disease; but this is more confirmed, if *Sol*, *Luna*, and Lord of the Ascendent be free from all manner of Affliction.

VIII. But in as many of these Angles as you shall find Planets, in those parts represented by that Sign and House, there is a Distemper, more especially if that Planet afflicts the same place.

IX. The Lord of the Ascendent, *Sol*, or *Luna* in Aspect, or afflicted by the Lord of the VI, VIII, or XII, conjoynd to evil fixed stars, or besieged of ♀ and ♂, or otherwise afflicted, the party is Sick.

CHAP.

CHAP. XXIII.

Of the Cause of the Disease.

I. **T**HE inward Cause is known from the position of the Significators in any of the aforesaid Trygons or Triplicities.

II. In fiery Signs the Cause must proceed from some violent Exercise or Labour performed, or from the heat of the Fire or Sun: In Earthy Signs it shews Gluttony, Surfeiting or Cold might be the occasion: In Airy Signs, the cause must proceed from troubles and Fancies of the Mind: In Watery Signs the cause proceeds from Drunkenness, Repletion, Surfeiting, or taking some inordinate Cold at Feet, by means of Women, or things cold and moist.

III. The outward Cause is known from the position of those Infortunes that afflict the Lord of the Ascendent; or from other principal Significators, and the Moon.

IV. The Lord of the Ascendent essentially strong, and in a good House, the Party is not ill, but accidentally outwardly afflicted, and so much the more if Saturn or Mars (neither of them being Lords of evil Houses or Dispositors of the Moon) afflict him: do but observe what House the Planet is posited in or is Lord of, and from the Judg-

ments of that House require satisfaction by Art. Thus *illy.*

Verbi gratia. The Lord of the Ascendent being casually afflicted by either Saturn or Mars, and they Lords of the second House (no inward cause of the Disease appearing) you may judge he is in want of Money, if the Significators apply, or hath had lately some damage, if they separate, or, if Lord of the fifth, say, the Cause may be from some Loss at Play, or Cross from a Child: if Lord of the sixth, say, from some Servant, or Loss of some Cattel, &c. through all the Houses of Heaven.

V. Luna or Lord of Ascendent, or both in the VI, the Sick is Author of his own Disease, or it proceeds of Surfeiting, Drunkenness or ill dyet, according to the Nature of the Sign.

VI. The Lord of the Ascendent in the VI, in σ , \square or ρ with the Lord of the VI, or Lord of the IV in the Ascendent; The Disease is natural.

VII. If Scorpio ascends, the Sick is the Author of his own Disease: for then Aries will be on the Cusp of the VI, and so Mars will be Lord of both places.

CHAP. XXIV.

Whether the Disease be in the Body or Mind.

I. **T**HE Sun, Moon and Ascendent signify the Body; their Lords the Mind.

II. The Sun, Moon and Ascendent afflicted, or any way impeded, and their Lords every way free, shews the Disease lyes in the Body, not in the Mind.

III. But if their Lords be afflicted or any way impeded; and they every way free, it demonstrates the Disease to lye in the Mind, not in the Body.

IV. If *Sol*, *Luna*, and the Ascendent, and their Lords; or either of them and his Lord be impeded, both Body and Mind are sick.

V. If *Saturn* be the afflicting or impeding Planet, Melancholy, Grief and Care about the things of this World is the Cause: if *Jupiter*, it may be about Religion, or things religious: if *Mars*, the Sick is frantick or mad: if *Sol*, Pride Ambition, or vain-glory may be the Cause: if *Venus*, Love, or some such foolish thing: if *Mercury*,

strange Imaginations, foolish Fears, and vexations in Study, or the like may be the Cause: if the *Moon*, some publick Concern of the Common-Wealth, or some foolish petulant Woman or Neighbour.

VI. This is general; but if you would understand in particular, consider what House the afflicting or impeding Planet is Lord of, and is posited in, and accordingly judg of the matter.

VII. The *Sun* in good aspect with the Lord of the Ascendent, the Dispositor of the \mathcal{D} , the Body is afflicted, the Mind is free.

VIII. So also if \mathcal{V} be Lord of the Ascendent, *Sol* and \mathcal{D} ; more especially if he be free from affliction.

IX. *Mercury* Lord of the Ascendent, in \mathcal{S} , in \mathcal{P} or \mathcal{M} Retrograde, he being also Dispositor of \mathcal{C} and \mathcal{D} , shew an affliction of the Mind.

X. If the Ascendent, *Sol* and *Luna* be all afflicted, then the whole Body is Diseased from Head to Foot.

CHAP.

CHAP. XXV.

*Whether the Diseased be bewitched
or no ?*

I. IF one and the same Planet be Lord both of the Ascendent and twelfth House, or the Lord of the Ascendent be in the twelfth House, or in *Conjuntion* with his Lord, there is danger.

II. If the Lord of the Ascend. be Combust and at the same time Cadent or Retrograde, or both, especially in the twelfth, there is *Witchcraft*: and contrarywise.

III. When *Saturn* is Lord of the Ascendent and twelfth, Retrograde therein, or in the seventh, or eighth, and *Luna* Lady of the sixth, apply to him, the Sick is bewitched, or an evil Spirit hath power over him, and he is disturbed in his Fancy. *Lilly*.

IV. If the Lord of the twelfth be in the Ascendent, or the *Moon* be in the twelfth, in opposition to the Lord of the Ascendent or twelfth, it argues *Witchcraft*, or that some evil Tongues are near or about him, and have bewitched him.

V. If the Lord of the twelfth, or Planet therein impedit, the Ascendent or its Lord by *Conjuntion* *Quartile* or *Opposition*, the *Sickness* is more than na-

tural, and *Witchcraft* is to be feared.

VI. The Lord of the eighth in the twelfth, or applying to the Lord thereof, and then immediately joyning to the Lord of the Ascendent, signifies Death by *Witchcraft*.

VII. The Lord of the sixth in the eighth, twelfth or third signifies some occult or hidden Disease, more than natural.

VIII. The *Witch* is discovered by the Lord of the twelfth, their Complexion, Stature, Condition; Consideration being had to the House of Heaven in which he is posited, whereby you may not only discover the *Witch*, but the way they live, and the Cause thereof.

IX. The Lord of the twelfth in the third shews some near Neighbour: in the fourth some one in the same house: in the fifth some Ale-Wife, Nurse, or drunken Companion; & so in *alias*. Where if the Lord of the Ascend. be in the Ascendent, it is of meer Malice: if in the second, by reason of some Money or Estate: in the third, by procure-

ment of some Neighbour, Brother or Kinsman, and so through all the Houses, the Cause is Known.

X. The Infortunes, *Saturn* and *Mars* Lords of the Ascendent, being in the twelfth combult and impedit by the Lord of

the twelfth, *the Sick is bewitched by a common Witch.*

XI. Lastly, But herein have special regard to the true Ascendent, lest you erre: for if a Parent ask for a Child, the fifth is its Ascendent, and the fourth its twelfth, and then according to rule, judge.

CHAP. XXVI.

To determine the Humour abounding.

I. **T**HE Significators, to be considered in this respect, are chiefly the Signs ascending, and on the Cusp of the sixth: their Lords, and the Signs they are posited in.

II. If therefore in the Figure of the Decumbiture, they or the most of them are in fiery Signs, the Disease proceeds of Choler, whence Feavers, &c.

III. If in Earthy Signs, the Disease proceeds from Melancholy, as Consumptions, Gouts, Agues, &c.

IV. If in Airy Signs, the Disease proceeds of Blood; from whence comes Pleurifies, Feavers, Head-Aches, Itches, &c.

V. If in Watery Signs, the Disease proceeds from Phlegm: such as are Coughs, Scurvey, Catarrhs, Dropsies, &c.

VI. But if the Significators be part in Fiery Signs, part in Earthy Signs, judge the Disease to proceed chiefly of Choler and partly of Melancholy, or chiefly of Melancholy, partly of Choler, according to the major Testimonies.

VII. And in the same manner you must judg if the Significators be part in Earthy Signs, part in Airy: or part in Airy, part in Watery: or part in Watery, part in Fiery: in each of which according to the plurality of Testimonies so judge.

VIII. And in this Case it will be very good to make use of the Fixed Stars in the judgment, for they assist much in the Discovery of the Cause of the Disease: at Cap. II. 12. lib. 3. Hor. Math.

CHAP. XXVII.

To determine the part of the Body afflicted.

I. **T**HE Parts of the Body afflicted in any Disease are always many: But we must learn to distinguish between them which are essentially afflicted, and them which are afflicted per accidens.

II. The Parts of the Body essentially afflicted are those signified by the Sign of the Ascendant, Cusp of the sixth, Lord of the sixth, and place of the Moon.

III. The Parts accidentally afflicted are those which are signified by the Lords of the Ascendant, sixth, and the Moon: and the Signs in which they are posited, both according to simple and compound Signification, by Cap. 7. sect. 2. 3.

The difference between an Essential and Accidental affliction is this: the one demonstrates where the Root of the Disease lodges; and where the chief and real affliction is; the other shews the sympathetical affliction of other parts, which are yet really well; and only sympathetically injured by reason of the extremity of the Distemper which radically afflicts some other part: as for example: one burns his hand, that is

the member essentially vitiated; but by reason of the extremity of the pain, the whole arm is inflam'd; I hope you cannot rationally judge, the Disease to lodge chiefly in the Arm, but rather essentially in the burned hand, and accidentally by Inflammation in the Arm: the like understand of all others. Thus generally: particularly we say,

IV. Saturn in the beginning of Cancer causeth pain in the left Side, as though an Awl was run into it: in Leo, in the Heart and Back: in Virgo, in the Head and Bowels: in Scorpio, pain in the Reins, with difficulty of pissing, & sic de alijs.

V. So Mars (Lord of the sixth) in ♈ or ♎ in the Ascendant, the Head is afflicted: yet most commonly this position gives pain in all parts of the Body; and oftentimes universal Breakings out, as Boils, Bitches, Ulcers, Itch, Small-Pox or Measles; in which case if Venus be any ways concern'd, 'tis much if it be not the French-Pox: if he be in ♎ great pain in the Back: in ♏ the Cholick: in ♐ pain in the Reins: in ♑ pain in the Bladder, & sic de cæteris.

VI. In this case also consider

ration is to be had of the Houses at Cap. 3. sect. 1, 2, 3. Hitherto of Simple Signification: the Compound is discerned by Cap. 7. sect. 2, 3. The Side of Body afflicted is thus discovered.

VII. If the Lord of the sixth be afflicted above the Earth, and in a Diurnal Sign, the Sickness is on the Right Side, and the upper part: but if he be under the Earth, and in a Nocturnal, on the the left Side, and the inferiour parts: Masculine Planets also denote the right Side of the Body: Feminine the left, afflicting those parts of the Body which they govern.

VIII. An unfortunate Planet in the Ascendent, or in δ to it (in what Sign soever) always afflicts the Head.

IX. The Lord of the sixth in a Diurnal Sign, the Disease is in the fore parts of the Body, as Face, Breast, Belly, &c. in a Nocturnal, in the back parts of the Body, or places invisible, as the Liver, Bowels, &c. this is true whether he be above or under the Earth.

X. *Saturn* Lord of the VI in δ in the M.C. shews the whole body is afflicted, with the Shins. but chiefly that on the left side. It be

be in the end of II or beginning of δ in IX, it shews a pain in the Stomach; but if in XII, a Stitch in the Side.

XI. η Lord of the VI in the V, in ∞ , shews the Disease is in the Leggs, Shins, Feet, Right side: in the V. in \mathcal{M} , and Retrograde, shews the Disease or pain is in the inward parts of the Body; but if he be Oriental and Ascending, it is in the External parts of the Body, and shews Ulcers, and general Breakings out.

XII. η in the IV in \mathcal{M} , shews pain through the whole Body, but chiefly in the left side and Legg.

XIII. \mathcal{D} in the I.C. in σ η or σ shews Diseases of the Lungs, Difficulty of Breathing, the same if ρ be Lady of the VI, and afflicted by σ in Fiery Signs.

XIV. The Ascendent, *Sol* and *Luna* afflicted, shews the whole Body is universally diseased.

XV. The Lord of the VI, in \mathcal{K} , in VIII, the Disease is in the upper part, and in right side neer the Shoulder.

XVI. *Venus* Lady of the VI, in \mathcal{M} , in the XII, the Disease is in the Womb and Reins towards the Left side.

CHAP.

CHAP. XXVIII.

To determine the Disease Astrologically from the Decumbiture.

I. **T**HE Disease is found out, from the House of Heaven; from the Nature of the Signs; and from the Configurations of the Planets.

II. The Houses of Heaven signifying in these Diagnosticks are the sixth, seventh and twelfth: the Quality of the Signs signifying are the Fiery which are Cholerick: the Earthy which are Melancholick: the Airy which are Sanguine: the Watery which are Flegmatick; and lastly, the Configurations of the Lords of the aforesaid Houses, or Planets posited therein, with either the Lord of the Ascendent, or the Ascendent, or the Moon, in acute Diseases; or the Sun in Chronique.

III. The sixth House and its Lord, and the Planets in it (if there be any) do commonly best describe the Nature of the Disease; chiefly, if they afflict either of the Luminaries or the Lord of the Ascendent.

IV. The Aspects of the Moon are always to be noted, for she translates the Nature of one Planet to another in the Constitution of Diseases: the which, if you please to examine the state

of that Planet whose Vertue she translates, you cannot be ignorant of the state of the Sick, and what may be the Cause of his Sickness.

V. Consider also what Planet she applies to, what Sign he is in, and its Nature, what his Qualities be, either a Fortune or Infortune, Masculine or Feminine, Nocturnal or Diurnal, Hot or Cold, Moyst or Dry, and what Humours, Parts of the Body, and Diseases he governs; and whether he be Angular, Succedent or Cadent; what Parts of the Body are signified by that House he is in: whether he be Direct or Retrograde, Swift or Slow, Oriental or Occidental, Combust or Free.

VI. *Saturn in Aries* signifies the Megrim: if he be Lord of the sixth, and alone in Fiery Signs, he shews Heclick Feavers.

VII. *Saturn in Leo or Capricorn* with *Car da Draconis*, or Combust, with *Venus*, or with Violent Fixed Stars, he signifies Pestilences, Small Pox, or other pernicious Feavers little better.

VIII. *Saturn in Watery Signs*, fig-

signifies continual Fluxes, & cold Tremblings: in Earthy, Consumptions and Melancholy: in Airy, Gouts and Running Pains.

IX. *Saturn* in moveable Signs shews a Flux of Humours in all parts of the Body: in common Signs Complicate Diseases, and such as change from one Distemper to another: in Fixed Signs, if in *Leo* Hectick Feavers: in δ or \approx Quartan Agues, Gouts, Leprosies, Cancers, &c.

X. If *Jupiter* signifies the Disease, the Liver is afflicted, the Digestion is bad, and the Blood abounds either in Quantity or Quality, being too hot or Watery, according to the Sign.

XI. *Jupiter* in Fiery Signs, shews Feavers, coming of Blood, called in Greek, *Synochus non putrida*: in Earthy Signs, the Scurvy or Cholick: in Airy Signs, Surfeits, and great Putrefaction of Blood: in Watery Signs the Dropsie, Itch and Scurvy.

XII. *Mars* is the Author of Violent Feavers with Putrefaction: in Fiery Signs, he signifies either the Feaver καυσος *Causos*, or else the Plague: in Earthy Signs, the Jaundice or Bloody Flux: in Airy, Frensy, Madness, and Quotidian Feavers: in Watery, the Scurvy, Dropsy or some nasty Disease of the Skin, as the Measles or Small-Pox, or Putrid Feavers.

XIII. If the *Sun* be afflicted at the Decumbiture by the Body, Square or Opposition of *Saturn*, the Disease proceeds of Melancholy: if of *Mars*, the cause is Choler; from the first a Consumption proceedeth;

from the other the Yellow Jaundice: *Sol* afflicted in *Leo*, causes Mischievous Feavers:

XIV. If *Venus* be Author of the Disease, it comes of Intemperance: if *Saturn* afflict her, it may be by Poyson: if *Jupiter*, by a Surfeit: if *Mars*, by Women, you may safely judge the French-Pox: if *Sol*, some Feaver, the Small-Pox or Measles: if *Mercury*, some Love Fancy: if *Luna*, it is the Palsie.

XV. *Venus* in Fiery Signs gives Quotidian Feavers; if δ be joyned to her they commonly prove rotten: in Watery, the Dropsy or Scurvy, and so much the more if *Mars* be joyned with her.

XVI. If *Mercury* cause the Disease, it is in the Brain, it may be Madness and idle Fancys: if δ afflicts him, the Sick will endeavour to make away himself.

XVII. If he be in δ of *Saturn*, it is Melancholly and a Consumption, Witchcraft or Incantment: if in δ with *Mars*, it is Frensy or Madness: if with *Sol*, little better: if with *Venus*, he is Love sick: if with *Luna*, it is the Falling-Sickness or Convulsion Fits.

XVIII. The Lord of the ninth in the sixth, it is some Religious Folly: the Lord of the twelfth in the sixth, Witchcraft is to be feared.

XIX. The *Moon* in *Aries* causes the Megrims, Falling-Sickness, Convulsions, or Dead Palsie: in δ the Kings Evil: in Π the Itch: in \S a Pleurisie, &c.

XX. *Saturn* in Fiery Signs (*Sol* being Weak) Causes Hectick Feavers: if conjoyned with δ Melan-

ancholy Feavers : if with ☿ or ☽, or ♀ Combust; or, if ♀ be posited with them in *Scorpio*, or *Leo*, the Feaver is Pestilential : in fixed Signs, Quartans, Gouts, Leprosies.

XXI. *Mars* in Fiery Signs gives all sorts of Burning Feavers ; and if he be conjoynd with *Venus* or *Luna*, Putrid ones from Flegm ; but if with *Mercury*, mixt ones.

XXII. *Mars* depressed below the *Sun* in the VI or XII in Fiery Signs, or being so posited, afflicts the Significator of Life, or Lord of the Ascendent, or those Significators apply to him by Conjunction or Aspect it shews e-

vil, malignant, and perilous Burning Feavers.

XXIII. *Mars* in ☿ ☉ shews the Feaver *Synochus* and Putrefaction ; in ☿ ♀, Melancholy and Plague.

XXIV. The Lord of the XII or IX in the VI, shews the Disease to proceed from Poyson, Inchantment, Witchcraft, or some occult Cause as Disturbance of the Mind, Religion, &c.

XXV. Lastly, to sum up all in few Words, the Planet shews the Disease it self: the Sign he is in, the part afflicted with the Manner and Quality of the Disease : and the House, the true Cause thereof.

CHAP. XXIX.

Of Directions and Transits in general.

Hitherto of the *Diagnosticks* from the *Decumbiture*, we now come to see what we can discover from the *Directions* and *Transits* of the *Radix*.

I. *Directions* and *Transits* are therefore to be considered, either as they respect the *Radix* from whence they proceed, or the present *Decumbiture* of the Sick.

II. The Differences between *Directions* and *Transits* are thus to be considered : *Direction* operate more powerfully, *Transits* more speedily.

III. This ought also to be un-

derstood, that a *Direction* or *Transit* doth not of necessity cause such or such a Disease ; but a Disease occurring ; it may be signified by such or such a *Direction* or *Transit*, and so the *Diagnosticks* to proceed accordingly.

For I have known many times the same *Directions* and *Transits* not only of different persons, but of the same, without any sensible Distemper to pass over : and therefore cannot positively and certainly force or cause any Disease ; but the Native being really sick, I have often found (and that infalli-
bly)

bly) the then present Directions and Transits have clearly discovered, not only the part afflicted, but also the Cause thereof, and the Disease it self.

IV. In Directions and Transits three things there are to be considered: first, The Significator, secondly, The Promissor: thirdly, The Sign and House in which they happen.

V. Therefore the Significator signifies the Body, or some part thereof, the Promissor, by what means it shall come; the Sign, the Humour abounding; the House, the Cause of the Disease.

But these things are promiscuously understood, for sometimes the Promissor shall signify the Disease and the Significator the Cause, according as they are radically Lords of good or evil Houses.

VI. The Ascendent, its Lord, the Planet therein, the Medium Celi, Sun, Moon, and part of Fortune, shall be generally in these Judgments the Significators of the Sick, and their Promissors the Authors of this Disease.

VII. This one thing also is always to be understood, that if the Mass of Blood be any ways concerned; and the Direction or Transit be by ♂ or ♀ (especially in Airy or Watry Signs) of the Promissor, that then the effects thereof is the product of such a Disease as universally affects the whole body.

Verbi gratia. The Ascend. ad ♀ & ♀ in III, Jupiter and Mars at the same time transiting the Ascendent, gave the Small-Pox, and that in an extreme manner.

VIII. In these Judgments the

good Aspects (whether of benevolent or malevolent Promissors) are not to be exempted, in the least, from signifying Diseases and Infirmities of the Body, only with this caution, that from the goodness of the Aspect, you judge the slightness or weakness of the Disease.

IX. Therefore Directions or Transits to Sextiles or Trines signify one and the same thing, if it be of one and the same Promissor: and so of Squares and Oppositions: with this difference that a ☐ performs the matter much weaker than a ♀: a Conjunction is of more power than a ☐ or ♀, and signifies the same thing, according as the Planet is good or evil.

X. The Directions and Transits of the five Hylegs to any Promissor or any other Significator to them, signifies essential Diseases of the Body: and of their Lords, essential Diseases of the Mind: but other Significators only some accidental Infirmity, which time and good government may overcome.

XI. Where the true rectified geniture cannot be obtained; in this case we must accept of the nearest time given, if it may fall within a quarter, half, or three quarters of an hour, and there only make use of the Transits, the which for that particular (without any other rectification) will be exact enough.

XII. But if the time cannot be given to some hours, learn whether it be a Diurnal or Nocturnal Geniture, the day and year when in which you shall only observe the Planets places.

CHAP. XXX.

Directions of the Sun to Promissors.

I. **SOL** to the * or Δ of *Saturn* signifies Melancholy; I have oftentimes found it the forerunner of an Ague.

II. To the σ \square or ρ of *Saturn* in Fiery Signs, the Megrim or Cephalagia, Trembling at Heart, Quartan Agues: in Earthy Signs, Cholicks, Cancerous Tumours and the Gout: in Aiery Signs Madnes, Frensey and Melancholy: in Watery Signs, Agues of all sorts, the Scurvy and Gout.

III. To the \square or ρ of *Jupiter* in Fiery Signs Feavers and Ulcers in the Lungs: in Earthy Signs, the Phthisick, Catarrhs, Colds, Coughs, Hoarsness, Black Jaundice and Cholick: in Aiery Signs, Corruption of Blood, with Inflammation, Scurvey, and pain in the Reins: in Watery Signs, the Small-Pox, Itch, Scabs, &c.

IV. To the σ \square or ρ of *Mars* in Fiery Signs, Pestilence and other violent and Burning Feavers: in Earthy Signs, the Yellow Jaundice, Quinseys and Cholerick Tumours: in Aiery Signs, Surfeits, Inflammation of the Blood, Stone in the Reins, Weakness in the Back: in Watery Signs, the Scurvey, sometimes a Pleurisie, Obstruction of

the Lungs, and Stone in the Bladder.

V. To the \square of *Sol*, Faintings and Swoonings, and generally whatsoever he signified in the Radix, he will be the Author of the Hurts of those Parts now; he also signifies Feavers, but not durable.

VI. To the \square or ρ of *Venus* in Fiery Signs, pricking Pains: in Earthy Signs, Flegmatick Tumours, and Flux of the Belly: in Aiery Signs, Putrefaction of the Blood, Running of the Reins: in Watery Signs, Obstructions at Stomach, Small-Pox, Measles, Dropfie, French-Pox.

VII. To the σ \square or ρ of *Mercury* in Fiery Signs, Frensey, Madnes, Passions of the Heart: in Earthy Signs, Melancholy, Kings Evil, Gout: in Aiery Signs, Frensy, Running-Gout, Gravel in the Reins; in Watery Signs, Quotidian and Tertian Agues.

VIII. To the σ , \square or ρ of *Luna* in Fiery Signs, the Falling-Sickness, Convulsions, Vertigo: in Earthy Signs the Bloody Flux and Running Pains: in Watery Signs the Dropfie, Scurvey, Fits of the Mother, oftentimes the Small Pox, Obstructions

structions in the Bladder : in Aiery Signs, Surfeits, Corruption of Blood, Cholick, Running Pains.

CHAP. XXXI.

Directions of the Moon to Promissors.

I. **L**UNA to the ♂, ☐ or ♀ of Saturn in Fiery Signs gives the Falling-Sickness, Convulsions, Apoplexy, Deafness, Poyson : in Earthy Signs, the Cholick, Gout, Consumptions, Poyson : in Aiery Signs, the Running Gout, Stone in the Reins, and Secret Pains : in Watery Signs, Obstructions of the Spleen, Black Jaundice, Stone in the Bladder, Gout in the Feet.

II. To the ☐ or ♀ of Jupiter in Fiery Signs, Corruption of the Blood, Feavers, Pleurifies : in Earthy Signs, Melancholy, Kings-Evil, Flux of the Belly : in Aiery Signs, the Scurvey : in Watery Signs, the Dropsie, Pleurisie, Small-Pox, Stranguria.

III. To the ♂, ☐ or ♀ of Mars in Fiery Signs, the Me-grim, Feavers and Falling-sickness : in Earthy Signs, Fits of the Mother, the Gout, Dysenteria : in Aiery Signs, Running Gout, Stone in the Reins, Putrefaction of Blood : in Watery Signs, Surfeits, Scurvey, Dropsie Gout, and other Flegmatick Swellings.

IV. To the ♂, ☐ or ♀ of Sol in Fiery Signs, Feavers, Loss of Eye-sight : in Earthy Signs, Consumptions : in Aiery Signs, Surfeits : in Watery Signs, the Scurvey : the same that we said even now at Cap. 30. Sect. 8. may also be said here.

V. To the ☐ or ♀ of Venus in Fiery Signs, Universal Corruption and Boiling of the Humours, Deafness, and Deflections of the Humours to the Eyes : in Earthy Signs, the Kings-Evil, Oedematous Tumors, and Flux of the Belly : in Aiery Signs, Lassitude of all the Extreamparts, Weakness of the Back and Distemper of the Reins : in Watery Signs, all sorts of Dropsies, Obstructions of the Stomach, and over-great Moisture of the whole Body.

VI. To the ♂, ☐ or ♀ of Mercury in Fiery Signs, vain Imaginations and Foolish Fears proceeding of Melancholy : In Earthy Signs, Melancholy Tumours, Obstructions in the Bowels : in Aiery Signs, Madness, Weakness and Pain of the Back : in Watery Signs, Fits of the

ning

the Mother, Obstructions of the Spleen, Stone Gout.

VII. To her own ☐ in all the Signs she generally signifies

Droopies and Hurts to that part signified by that Sign she is in in the Radix.

CHA P. XXXII.

Directions of SORS to Promissors.

I. PART of Fortune in this case generally signifies the whole Body : but specially some particular part by *Señ. 8. 9. 10. Cap. 6.*

II. Therefore directed to the σ , \square or ρ of Saturn it signifies Consumptions : of Jupiter, Putrefaction, Surfeits, Scurvey : of Mars, Feavers and Wounds : of Sol any Passion of the Heart : of Venus, Obstructions or Illness of the Reins : of Mercury, a disturbed Fancy : of Luna, the

Falling Sicknes or Dropie : but of Jupiter and Venus we except the Conjunction.

III. If the Direction falls in a Sign which is of the Nature of the Promissor, the Disease is more remis ; but if the contrary, the more extream.

IV. And it is to be noted that that part of the Body signified by Part of Fortune, at *Señ. 9. Cap. 6.* shall particularly suffer according to the Nature and Quality of the Direction.

CHAP. XXXIII.

Directions of the Ascendent to Promissors.

I. THE Ascendent to the evil Aspect of any Promittor, causes that Humour to abound which is according to

the Nature of the Sign : the which in Fiery Signs is Choler : in Earthy, Melancholy : in Airy, the universal Mass of the Blood : in

in Watery, universal Corruption of all the Humours.

II. The Ascendent to the σ , \square or ρ of *Saturn* gives in Fiery Signs, Distillations, Melancholy: in Earthy Signs, Consumptions, Agues, Obstructions of the Terms: in Aiery, Surfeits: in Watery, the Scurvey, Gravel and Stone.

III. To the \square or ρ of *Jupiter* in Fiery Signs, pestilent Feavers, Pleurifies and Inflammations in that part signified by that Sign in which the Direction falls: in Earthy Signs, Melancholy, Spleen and Cholick: in Aiery Signs, universal Corruption of the Blood, the Small-Pox, French-Pox, Scurvey: In Watery, the Small-Pox, Dropsie, Cacochimick Disposition of the Body.

IV. To the σ , \square or ρ of σ in Fiery Signs, Wounds, Poyson, Pestilent Feavers, Frensey: in Earthy Signs, the Cholick or Gout: in Aiery Signs, Inflammations of the Blood, Stone in the Reins: in Watery Signs, the Small-Pox, Measles, French Disease.

V. To the σ , \square or ρ of *Sol*, in Fiery Signs, continual Feavers, Weakness of Sight: in Earthy Signs, Scirrhus Tu-

mours in the Neck, Obstructions of the Intralls: in Aiery, in Children the Measles, in Elder persons Feavers, Weakness and Pain in the Back: in Watery Signs, the Scurvey.

VI. To the \square or ρ of *Venus* in Fiery Signs, hot Defluxions of Rhenm: in Earthy Signs Obstructions, and Oedematosus Swellings: in Aiery Signs, the French Disease, Corruption of the Blood: in Watery, the Dropsy, Diseases in the Secrets, and sometimes the Diaberes.

VII. To the σ , \square or ρ of *Mercury* in Fiery Signs, Catarrhs, Consumptions, Vertigo's, Frensy: in earthy Signs Melancholy, Obstructions, Quotidian Agues: in Aiery Signs, the Running Gout, Diseases of the Reins, foolish Fancies in: Watery Signs, Fits of the Mother, Stone in the Bladder.

VIII. To the \square or ρ of *Luna* in Fiery Signs, the Vertigo, Megrim, Falling-Sickness, Apoplexia: in Earthy Signs, Catarrhs, the Palsy, Wind Cholick, Obstruction of the Terms: in Aiery, Surfeits, Apostumes, Small-Pox, Measles: in Watery Signs, Scurveys, Dropsies, Diseases in the Secrets.

CHAP. XXXIV.

Directions of the Medium Coeli to Promissors.

I. **TO** the ☐ or ♀ of a Planet, shews detriment to that member which is represented by the Sign culminating, & to those members signified by the Sign in which the Direction falls: but the first of these is an essential affliction, the latter only an accidental: so that the member signified by the Sign culminating shall be afflicted with a hot, cold, moist, or dry Disease, according to the nature of the Sign in which the Transit or Direction falls.

II. The Quality of the Disease shall be discerned from the Promittor or afflicting Planet: the reason and cause from the House in which the Direction or Transit falls.

III. The Situation is known from the Sign Culminating: the Magnitude from the Promissor's being Strong or Weak: the

number from the form; the name, from the place.

IV. It is especially to be considered, that the *Medium Caeli* shall have great Signification of the Mind, and Diseases thence proceeding.

V. So directed to the ♂ ☐ or ♀ of *Saturn*, it shall signify Envy, Malice, Melancholy, and Diseases thence arising: of *Jupiter*, something of Credit, Honour, Honesty, or Religion is the cause: of *Mars*, Anger, Madness, Choler: of *Sol*, Ambition, Vain-glory, Dignity, Office, Place lost: of *Venus*, Pride, Dishonesty, Love, or some such like: of *Mercury*, Studies too deep, high, or difficult for the Capacity: of *Luna*, some small, foolish, common or ordinary Matter. In these Judgments you may except the *Conjunction* of *Jupiter* and *Venus*.

E CHAP.

CHAP. XXXV.

Directions of the Remaining Significators.

I. **T**HE remaining Significators are Cusps of the remaining Houses, and the other five Planets.

II. The Houses govern the parts of the Body, the Signs in order govern : and therefore when any of the said Cusps meets with an evil Promissor, the parts of the Body signified by that House, and Sign thereof shall accordingly suffer, by Sect.

1, 2, 3. Cap. 34.

III. When the Cusps of the sixth or twelfth Houses come by Direction or Transfit to a *Hy-leg*, or the Lord of the Ascendent or other eminent Significator, it signifies Sickness ; and the Sign in which the said Significators are posited at the time of the said Transfit or Direction, shall demonstrate the part afflicted, and Humour afflicting.

IV. The Lord of the Ascendent or tenth, or Planets posited therein, coming to the \square or \wp of the Lords of the sixth or twelfth, or Planets posited therein, shew Sickness : the Nature of which is to be enquired into from the Quality of the Promissor.

V. If the Promissor be h it may be a Consumption, or Me-

lancholy : if v a Surfeit, or Pleurisie : if \wp a Fever or the Stone : if \odot , Swooning Fits : if q , the Scurvey or Mother : if d , the Dropsie or Falling-Sickness : but in these Judgments, you will do well specially to consider the Sign for the part afflicted, and the Nature and Quality of the Disease.

VI. It will be good to observe in what House of the *Decumbiture* the Lords of the tenth, Ascendent and sixth of the *Radix* are ; as also in what Aspect the Lords of the tenth and Ascendent, or Planets on their Cusps, of the *Decumbiture*, are with the Lords of the sixth, eighth, or twelfth of the *Radix* ; for from these considerations good judgments arise.

VII. If the Disease be Acute, consider also the immediate preceeding Lunar Radical Revolution : but if Chronick, then the preceeding Solar, with the same respect and judgment as if they were the true Figures of the *Decumbiture* : for Diseases have a Radical or Essential *Introitum* and *Judicative* as well as a Fained or Accidental *Decumbiture* and *Crisis*, as they that please to observe shall find ; and here, what we but even now

nint.

hinted at *Sect. 6.* may also take place.

VIII. Consider also what parts of the Body the Planets govern *per se* (by Chap. 4.) and what by position (by Cap. 7. *Sect. 2*) and when they by Direction or Transit shall come to an evil Aspect of any Promissor, judge those parts to be afflicted according to the Nature of the Promissor, and Quality of the Sign, the Direction falls in.

IX. If the Direction falls in Fiery Signs, it proceeds of Choler: in Earthy, of Melancholly, &c. in *Aries*, the Head: in *Taurus*, the Throat, &c. are also *per accidens* afflicted.

X. If the Direction falls in Moveable or Common Signs, especially in Angles, it shews an acute Disease, especially if *Mars*, *Sol*, *Venus*, or *Luna* be Author thereof: but if in Fixed Signs, especially in Succedents or Cadents and *Saturn* or *Jupiter* be the Authors thereof, a Chronick Disease.

Thus knowing the part afflicted, the Humour afflicting, the Planet causing, the House concerned, and the Species whether acute or chronick, the Disease it self, by name, cannot ye long undiscovered.

XI. In all these Judgments have great regard to the Fixed Stars; for they, according to their magnitude and position, help to encrease the Disease: and if a Direction be to the body of a Fixed Star of the first or second magnitude, of the nature of an Infortune, it as powerfully doth its office as that Infortune it self: if also a Direction be neer the body of an evil fixed Star, in like manner it much augments the Disease.

XII. Much more might be said, almost *ad infinitum*: and what we have spoken of Directions understand the same of Transits. only with the Caution at *Sect. 2. 3* Cap. 29.

CHAP. XXXVI.

The Variety of the Planets Significations being conjoyned either by Body or Aspect.

SATURN (Lord of the Ascendent, or sixth, or placed neer their Culps) in Conjunction or Aspect with *Jupiter*, corrupts the Blood with Melancholy, and gives Lame-ness in the extreame parts.

II. In σ or Aspect with *Mars*,
E 2 Yel-

Yellow Jaundice, Quartan Agues, the Stone, Gout, and such like long Diseases.

III. In \odot or Aspect with *Sol*, Trembling, Fearfulness, Melancholy, Consumptions, and Faintings at Heart.

IV. In \odot or Aspect with *Venus* the Green Sicknels, Melancholy and Quotidian Fevers: If it be in ♌ or ♍ it is generally Poyson, Stone, the French Pox, or virulent Gonorrhea.

V. In \odot or Aspect with *Mercury*, Melancholy Fancies, Madnes, Consumption.

VI. In \odot or Aspect with *Luna*, the Epilepsie, Convulsions, and in Children the Rickets: in Elder Persons the Black Jaundice.

VII. *Jupiter* in \odot or Aspect with *Mars*, the Fever *Ephemera*, putrid Fevers also, Surfeits, Inflammation and Putrefaction of the Blood; in Earthy Signs, the Quinsy or Bloody Flux; in Aiery Signs, Phlegmons, &c.

VIII. In \odot or Aspect with *Sol*, the Pleurisie, Plague, Pestilence, Small Pox and Malignant Fevers

IX. In \odot or Aspect with *Venus*, certainly give Putrid Fevers or the French Pox, with an universal Corruption of the whole Mass of Blood, as Measles, Small Pox, Surfeits, &c.

X. In \odot or Aspect with *Mercury*, Defluxions, Fluxes, and Disturbance about Religious Fancies: If ♄ be any ways evilly conjoynd, and it be in the fall or detriment of ♄ (he being Lord of the Ascendant) the Pa-

cient certainly is some Religious Devil.

XI. In \odot or Aspect with *Luna*, generally the Pleurisie, or a Cacochymick Disposition, the Scurvy or Dropsie.

XII. *Mars* in \odot or Aspect with *Sol*, the violent burning Fever *Causos*: the intermitting Tertian, Plague, Carbuncles and Erysipelous Tumours.

XIII. In \odot or Aspect with *Venus*, the French Pox, Gonorrhea, Scurvy, &c.

XIV. In \odot or Aspect with *Mercury*, generally Madnes, Frensey, and Watchings.

XV. In \odot or Aspect with *Luna*, the Palsie, Dead Palsie, Convulsion, Yellow Jaundice.

XVI. *Sol* in \odot or Aspect with *Venus*, a Fever, Measles or Small Pox.

XVII. In \odot or Aspect with *Mercury*, Melancholy, Consumption and Weaknes

XVIII. In \odot or Aspect with *Luna*, Rheums, Defluxions, Lameness, Agues, and Putrefaction of the Blood.

XIX. *Venus* in \odot or Aspect with *Mercury*, signifies Lameness, Scurvey, or some Love Fancy.

XX. In \odot or Aspect with *Luna*, the Palsie, Numbness, Lameness, or Rheumatism.

XXI. *Mercury* in \odot or Aspect with the *Moon*, for the most part, the Falling Sickness, or some Distemper in the Brain. Thus in general: otherwise we say,

XXII. First, that in all the foregoing Notions, you must respect the Quality of the Aspect: for a \ast or \triangle can signifie but lightly

lightly, and make but small additaments to a Disease, rather signifying the Nature of its inclination; than any thing else: but a ♂, □, ♀ plainly increases its Rigour and Violence, according to the Nature and Power of the Planet conjoined.

XXIII. Secondly, That if the Aspect be partil, it shews the present condition of the Sick, and Nature of the Sicknes; but if Platick, and separated, from what Humours and Matter the Disease is sprung; if applying, what it is likely to come to.

XXIV. Thirdly, That you

have a great regard to the Sign, its Nature and Quality; for Earthy Signs signifie colder and dryer Diseases than Aiery: and Fiery Signs hotter and dryer Diseases than Watery, &c.

XXV. Fourthly, That the Humour abounding being known (from the Quality of the Trygon and Planet) and the parts of the Body afflicted (from the Signification of the Sign and House) if you consider what Diseases most commonly accompany that Humour, and vitiate those parts, you may very nearly determine the Disease afflicting by name.

CHAP. XXXVII.

Of the Original Causes of Diseases.

I. A Disease of the Body is a Hurt in some part thereof, disposing of it to a total perishing.

II. Diseases are various, and almost innumerable; sometimes simple, and sometimes complicate: but when simple Diseases are the causes of complicate, they are no longer called Diseases, but the symptoms of a Disease.

III. Diseases are therefore either by Solution of Unity, or Distemper of Humours.

IV. Solution of Unity is either by a Wound or a Rupture.

V. Distemper of the Humours, and the Diseases thence proceeding; come always from some

of these six causes; to wit,
1. *Crudities*: 2. *Inflation*:
3. *Distillation*: 4. *Obstruction*:
5. *Putrefaction*: 6. *Inflammation*.

VI. *CRUDITIES* proceed from Nutriment not sufficiently concocted: to wit, either the Chyle, or the Blood; which comes, first from the Quality of the Food; secondly, from the Quantity; thirdly for want of Exercise.

First, in respect of Quality, when it is taken too raw, stegmarick, unwholsome, or that which the Concoctive Faculty cannot overcome: secondly, in Quantity, when more is received than the Concoctive Faculty can alter and digest; from whence undigested Humours, like

Some strange Matter burthen the Body: thirdly, Want of Exercise, which suffocates the natural heat, that it cannot stoutly perform its office in the Concoction of Food.

VII. *Crudities in the Somach cause loathing of Food, and the Green-Sickness.*

For so long as the first Food is not digested, there can be no Appetite to any other: again, according as the likeness the Crudity is changed to, so the Stomach desires, as to eat Earth, Chalk, Coals, &c. for every like desireth its like.

VIII. *Viscous Crudities lodging in the Ventricle or Guts being warmed, are vivified, and turns into Worms, which gnawing the Bowels, stir up evil Vapours: from hence also comes Phantasies which disturb the Brain.*

IX. *Lastly, Crudities under the Skin; to wit, in the Flesh and Blood beget Paleness: and gathered together and putrified, it produces Apostumes, Scabs, Itch, Ulcers, &c.*

X. **INFLATIONS** are gross Vapours exhaling from the Crudities that are gathered together, thereby stretching and extending the parts it afflicts.

XI. *Inflations or Wind causeth Yexing or Belching in the Ventricle: Panting in the Heart; Giddiness in the Head; Laziness and Stretching in the whole Body, if it be without pain.*

XII. *But Inflations with pain, causeth the Cholick or Ach in the Bowels; and Prickings in the Muscles, either sharp or blunt, according as it is more gross or subtil.*

XIII. **DISTILLATION** is

caused from the Condensation of Crude Vapours into Rheum.

For Crude Vapours in abundance filling the Head, and by reason of grossness and want of passage the ordinary way; through Coldness of the Brain they become Rheum, flowing by the Eyes, Nostrils, Ears, and Throat, thereby causing many Diseases.

XIV. *Distillations at the Nose cause the Poxe: into the jaws, a Catarrh: into the Almonds, the Quinsy: into the Lungs, the Asthma, and difficulty of Breathing: which if it be salt and sharp, ulcerating the Lungs, it causes the Cough; and if it be long and often, it fills the Lungs with Apostumes, thereby causing a Consumption.*

For the Ulcerated Lungs not performing their office of Cooling as they ought; the Vital Spirit becomes hotter than it should, thereby feeding upon the Flesh and Blood so consuming (at length) the very Liver it self, the Fountain of Radical Moisture, whence for want of a daily Generation of Blood, immediately follows a Consumption of the whole Body.

XV. *Distillations being much and gross, flowing down the Back, cause the Pally; by hindring the Animal Spirit, that it cannot be distributed by the Nerves, springing from the Spina dors: Filling the Nerves of the Muscles only, it becomes Spasms, or a Convulsion: But if it flow subtil and penetrate the Nerves, it manifests it self in the extremities of the Members, in sharp pains called the GOUT; which in the Feet, are called Podagra;*

in the Knees, *Gonagra*; in the Hips, *Iſchias* or *Sciatica*; in the Hands, *Chiragra*: generally in many Joynts *Arthritis*: Running, *Rheumatismus*.

XVI. Lastly, *Distillations* ſtaying in the Head (being ſubtil and thin) cauſe the Head-Ach: when too raw and phlegmatick, the Lethargy: ſalt and chole- rick, the Phrenſey: groſs and mixt with Melancholy, the Epilepſy or Falling Sickneſs: but groſs and phlegmatick filling at once all the Veſſels of the Brain, cauſe the Apoplexy, which is a Privation of all Senſe and Motion, whereby the Vital Spirits and Heart in the Heart, are ſoon extinguiſhed.

XVII. OBSTRUCTION is a Stoppage of the Inwards by thickned Flegm, ſo that they cannot execute their office.

XVIII. When the Intrails are obſtructed, that they cannot void, it is the wringing of the Guts: when the Liver, the Dropſy; *For the Chylus being not turned into Blood, flows through the Veins and Members, and cannot be turned into Fleſh.*

XIX. When the Gall is obſtructed, it cauſeth the Yellow Jaundice: when the Spleen, the Black-Jaundice.

For in the one Choller, in the other Melancholy, diſſuſe themſelves through the Blood.

XX. Laſtly, when the Pipes of the Urine or Bladder are ſtopped, it is by reaſon of Gravel or the Stone, which in Obſtructions by reaſon of their ſharpneſs cauſe extream pain.

XXI. PUTREFACTION is the Corruption of ſome Humour

in the Body, to wit, of Flegm, Choler, or Melancholy, cauſing *Febris Putrida* a rotten Fever, or Ulcer.

XXII. *Putrefaction* within the Veſſels, if it be of all the Humours equally, it cauſeth a Fever called *Synochus putrida*: but if of one Humour only, a continual Fever, as of Choler, a continual Tertian or a Burning Fever: of Flegm, a continual Quotidian: of Melancholy, a continual Quartan.

XXIII. *Putrefaction* without the Veſſels cauſeth an intermitting Fever: of Flegm, an intermitting Quotidian: of Choler, an intermitting Tertian: of Melancholy, an intermitting Quartan.

XXIV. *Putrefaction* in the extream parts, in Apoſtumes or Tumours, cauſeth Ulcers.

XXV. INFLAMMATION is an over-heating of the Vital Spirit, or of the Blood, by reaſon of too much motion, either of Body or Mind; or elſe by Obſtruction.

For motion will heat even to firing: and Obſtruction doth by an Antiperiſtaſis exaſperate the heat included, even in things watery and putrid, ſo that at length it breaks out violently: for wet Hay laid together (for want of tranſpiration) ſoon inkindles.

XXVI. When the Blood is kindled within the Veſſels it cauſeth a Fever; but when under the Skin *St. Anthony's Fire*.

XXVII. The Spirits enflamed cauſe *Ephemera* or *Diaria ſimpli- citer*, an one day Fever; or elſe *Diaria plurimum dierum*, called *Synochus non putrida*, enduring three or four days.

XXVIII. *Inflammation in the fleshy parts causeth Heſtick Febris, or Marasmus.*

From hence we learn, first, Putrid Fevers burn the Humours: secondly, Ephemera burns the Spirits or Blood: thirdly, Heſtick Fevers burn the solid parts; for Heſtick Fevers fasten on the Bones and Membranes, eating and consuming them with an unnatural heat, by degrees, and almost insensibly, till it cause Death, in manner of a Consumption: but the Ephemera feeding upon the Spirits only, scarcely endures above one or two days, till the peccant matter be consumed by the Spirit it self, or the Spirit be overcome by it; hence Health or Death follows within three or four days; and of this sort also are all Malign and Pestilential Fevers. And the Putrid Fever seizes the Blood and Humours, by which the whole Body grows hot and inflamed. Where note, if the Humours putrifie within their Vessels, especially near the Heart, as the Liver or the Gall, the Spirits are kindled against them, and ceases not till they expell or are expelled, and therefore is often Mortal, and is

called the continual Fever: But if the Humours putrifie out of their Vessels, in the Veins and Members, it is an intermitting Fever, for the Spirits that bear, oppose that putridness at certain times; but the contest (being far from the Heart) ended, the Spirits return home; so that if the putrifying Humour be Flegm, it renews the contest the next day, hence the Quotidian Fever: if yellow Choler, then every third day, hence Tertians: if black Choler, the fourth day, hence Quartans: the inequality proceeds from the Humour; for Flegm, as it is speedily dissipated, so it as speedily recollects it self, making a new contest with the Spirits: yellow Choler (which is hot of it self) opposing the Spirits, causeth a longer contest, and is commonly called a Tertian or burning Fever; but Attribilis, burnt Choler or Melancholy, being a gross, cold, dreggy, sluggish and obstinate Humour, being overcome, cannot so easily return, to wit, till the fourth day, by reason it is long in recruiting of it self, and hence Quartans become stubborn and tedious.

CHAP. XXXVIII.

Of the Intemperature of the Principal Parts, and first of the Brain.

I. **T**HE Diagnosis of a hot Brain, The Forehead looks redish, is hot, red Veins appear on

the White of the Eye, the Hair is hard and curling, they are soon bald, few Excrements flow

flow from the Ears, Eyes, Mouth, Throat, Nose, they sleep little, and that unquietly.

II. *Of a cold Brain.* The Hair is black, soft, smooth, growing slowly, is easily offended by Cold, from whence comes Distillations and Heaviness of the Head, pale Face, cold Forehead, dull, and given to sleep.

III. *Of a dry Brain.* Curled, hard, rugged Hair (but soon bald) quick Wit, not delighting in Sleep, with few or no Defluxions from the Head by the ordinary passages.

IV. *Of a moist Brain.* Smooth soft Hair, never bald, dull Wit, many excrements flowing from the Head, easily weeping, sleeping much, and soundly.

V. *Of a hot and dry Brain.* Little or no Defluxions from the Head, quick and nimble Wit, much Watching, red, and hot Forehead, curled Hair, but soon bald.

VI. *Of a hot and moist Brain.* A high and red Colour of the Face and Eyes: the Veins of

the Temples are great, the Head abounds with Moisture, but it is well concocted, much troubled with Pain in the Head especially when the Wind is South, molested with strange Dreams, thinking they see things which they see not, especially if heat most abound.

Remember but the signs of a simple Distemper, you may with ease find out which Quality most abounds; for, if heat be much and moisture little, most signs of heat appear, and contrarilywise.

VII. *Of a cold and dry Brain.* The Face is cold, livid, swarthy, and discoloured, the Head is suddenly afflicted with Cold, being troubled with Distillations upon every slight occasion, no Veins appear in the Eyes, being oftentimes troubled with Heaviness.

VIII. *Of a cold and moist Brain.* Excrements flow much to the Nose, the Head being repleat therewith, an extream desire of Sleep, the Senses and Wit being very dull.

CHAP. XXXIX.

Of the Heart.

I. *Diagnosis, of the Heart too hot.* There is deep breathing, swift pulse, he is bold, active, hot, furious, angry, the

Breast and upper part of the Belly is rough, and the whole habit of the Body is hot (unless the Liver be cold :) a broad

Breast

Breast and a little Head are certain signs of too hot a Heart.

II. *Of too cold a Heart.* The Pulses are less than naturally, the Breast is little, the Head is great, moves like a Snail, without any courage, he is timorous, afraid of his own shadow, hath no hairs upon his Breast.

III. *Of too dry a Heart.* The Pulse is hard, he is not easily angered, when angered he is difficult to be pleased again, the whole body is very dry, (unless the Liver be very moist.)

IV. *Of too moist a Heart.* A soft Pulse, soon angry, soon pleased, the whole habit of the body is moist unless the Liver be dry.

V. *Of a hot and dry Heart.* The Pulses are great, hard and swift, Breath swift, the Breast is very rugged or hairy, they are active, angry, in all things.

VI. *Of a hot and moist Heart.* The Breast is not very rough or hairy, quick, hasty and passionate, but not cruel; the Pulse is great, soft and swift.

VII. *Of a cold and dry Heart.* A hard Pulse, respiration moderate, if the Breast be proportionate, but if broad, it is rare and slow, smooth Breast, and difficult to be angered.

VIII. *Of a cold and moist Heart.* A soft Pulse, fearful, slow, little Spirit, lumpish and heavy, a meer Coward, a smooth clear Breast.

CHAP. XL.

Of the Liver.

I. *THE Diagnosis of a hot Liver.* Great large Veins, burnt or red Choler, the Blood hot, Bowels rough, the whole Body is over heated (unless the Heart be too cold.)

II. *Of a cold Liver.* The Veins are narrow, Flegm abounds, the whole Habit of the Body is cold and lazy, (unless the Heart be the hotter) the region of the Belly is smooth.

III. *Of a dry Liver.* Blood but little and thick, the Veins are hard, the Body is dry, and tends to a Consumption.

IV. *Of a moist Liver.* Blood much and Watery, the Veins are soft, the Skin is smooth, unless the heat of the Heart hinder, the Body inclines to a Dropsie.

V. *Of a hot and dry Liver.* The Skin of the Belly is rough, the Body bound, fill'd with yellow Choler in Youth, but *Atta Bilis*, or Melancholy in Age; they are subject to dry Scabs, the Veins are hard, and the whole body is in a Consumption or Hectick.

VI. *Of*

VI. Of a hot and moist Liver.

The Belly is smooth, the Vessels abound exceedingly with Blood, the Veins large, the habit of the Body hot and moist (unless the Heart be cold) if these Qualities much superabound, presently comes a Disease of Putrefaction, it may be a Fever.

VII. Of a cold and dry Liver.

The whole habit of the Body

is so also, the Veins are small the Blood little, the Body lean, Melancholy abounds the Party is in a Consumption.

VIII. Of a cold and moist Liver.

The Belly is soft and smooth, the Blood is flegmatick and Waterish, the Veins narrow, the Colour pale, the whole Body is plump, lazy, dull and flegmatick, if not in, yet enclining to a Dropie.

CHAP. XLI.**Of the Stomach.****I. DIAGNOSIS of a hot Stomach.**

It digests more than the Appetite Requires, and things hard of Digestion; it delighteth in hot Meats and Drinks, yet is not hurt by Cold.

II. Of a cold Stomach. There is a quick Appetite, but weak Digestion, slow Belchings, desiring hot things.

III. Of a dry Stomach. There is much Thirst, but it is quenched with little Moisture, and burthened with much; he delights in roasted, dry and burned Meats.

IV. Of a moist Stomach. There is seldom any Thirst, yet the Stomach will endure much Moisture, and delights only in moist things.

CHAP. XLII.**Of the Habit of the whole Body.****I. DIAGNOSIS of a good Temperature.**

The Colour of the Face is red and white, the Hair brown and a little curling, the Body fleshy

in a mean, both in respect of Quantity and Quality; and the like Analogy in all the parts, neither fat nor lean, gross nor thin, hard nor soft, rough nor smooth,

nor

not too hot, nor too cold, nor any excess.

II. *Of a hot temper.* If it enclines neither to Moisture, nor Dryness, it is hot in touching, and rough, hairy, and that curls, little or no fat, and ruddy.

III. *Of a cold Temper.* Want of Hair, Fatness, Coldness, the Colour of the Face is leaden or swarthy.

IV. *Of a dry Temper.* The Flesh is hard and dry, Body slender, and so much as the Flesh is harder than it ought, judge it so much dryer than it ought.

V. *Of a moist Temper.* The Body is fat, moist, soft, and very smooth.

VI. *Of a hot and dry Tempera-
ture.* The Body is exceeding rough and hairy, hot and hard in touching, thin and slender in appearance, little fat, of a blackish swarthy Colure.

VII. *Of a hot and moist Tempera-
ture.* The Skin is ruddy, soft and warm, the Body Flethy, but not fat, indifferently Hairy, and the Colour of the Hair of a blackish brown.

VIII. *Of a cold and dry Tempera-
ture.* The Body is hard, thin without Hairs, the Hair and Colour are analogical to the Coldness, the Skin is rough

and cold, and Melancholly abounds.

IX. *Of a cold and moist Habit.* The Body (except the Head) is free from Hair, is soft, plump, white, gross, and fat, enclining to a Dropsie.

X. *These things are to be noted.* First, That the general Habit follows commonly the Constitution of the Heart and Liver. Secondly, That that which we call the Habit of the Body, is that which is represented to the Eye. Thirdly, That notwithstanding these Diagnostics, the Air, Heat of the Sun, and Clime may much alter them. Fourthly, That if the Member wax easily cold, it is a Sign of Coldness, if not, of Heat; if it be offended with dry things, of Dryness, if not, of Moisture. Fifthly, That always the Bigness of the Bones be considered, for sometimes a Member may seem gross when it is slender, the Bone being great, and contrariwise. Sixthly, That the solid Parts can no ways be made moister than they should be, the Flethy may. Seventhly, Lastly, That the proper and true Nourishment of the Similary Parts is done by Opposition or Repercussion, not by Attraction.

CHAP. XLIII.

Of the General Diagnosticks.

I. **T**O know perfectly the Disease, first find out the Place, next the Kind, and then the Cause.

II. The PLACE is known by the Action hurt; by the Kind, and Site of the Pain; by the Excrements, Accidents, and other proper Symptoms.

III. The Action hurt shews the part from whence it proceeds to be defective, for an office of the Animal, Vital, and Natural Faculties, and therefore shews which of those there are affected.

IV. The Hurt of the Reason, Imagination, or Memory shews the Brain to be affected: Want of Sense or Motion shews the Nerves, or else their Original.

V. The Difficulty of Breathing shews the Lungs: the Pulse disturbed shews the Heart: Obstruction in the Throat shews the *Aspera Arteria*: want of Digestion, the Stomach: Distemper of the whole Body shews the Liver: &c. &c. &c.

VI. The Kind points forth the Place; a Pain with Pulsation is from a Nerve Hurt: with pricking from a Membrane distended: with Convulsion from a violent drawing of the Nerves or Tendons.

VII. Pain with swelling shews Repletion of the Veins:

when deep in the Flesh it shews the Membrane called *Periostrion* to be hurt, when gentle in the Flesh.

VIII. The Situation makes known the Seat of the Disease; if it be in the right Hypochondria the Liver is hurt: if under the left side, the Milt: where the Pain is, there is the Sickness: if the Pain be without, he lyes best on the whole side: if within, he lyes best on the Sick-side.

IX. The Excrements shew the part affected: what is cast forth by Coughing, shews the Lungs: by the Nose, the Head: Vomiting, shews the Stomach: if Cholera, it shews the Gall: if Flegm, the Liver: if Melancholy, the Spleen: if a Bloody Flux, the Bowels: if Issuing or Obstructions of the Water, it is the Bladder: if the Pleura which covers the Ribs, is pierced, Wind flows forth at the hole.

X. In this case the Form of issuing forth is to be noted; so that if Blood, in issuing, doth as it were leap, it shews that it proceeds from the Arteries; if it flow from a Vein.

XI. The Accidents also point at the place; so a Pearl declares the Eye to be molested, swelling on the right side the Liver; of the left, the Milt.

XII.

XII. The *Symptoms* shew the Place, for Madness shews the Brain; redness of the Cheeks the Lights: Indigestion, the Stomach.

XIII. The *Part afflicted* being found out, search whether it be by *Idiopathy* or *Sympathy*; *Idiopathy* is the proper indisposition of the part it self: *Sympathy* is the indisposition of one part by the fault or hurt of another, and is threefold, to wit, by Inflation, Distillation and Inflammation.

XIV. The *Idiopathy* is known by the Singularity, Continuity, and Constancy of the Matter of the Disease, in respect of Quantity: *Sympathy* is known by Affinity, Intermission, and Augmentation or Diminution of the Matter of the Disease, in respect both of Quantity and Quality.

XV. The Hurt which hindreth the Action is called *Morbus*, a Disease; that which follows it, is called *Symptom*; and that which creates it, is called the *Cause*.

XVI. The *Symptom* is known of it self, being obvious to the Sense, the *Disease* and *Causes* are known by the *Symptoms*, which are chiefly three (to wit) Actions, Hurt, Excrements, and Accidents.

XVII. *Morbus* a Disease therefore, is that which hurts the Action of the Part affected by the *Sett. I. Cap. 37.* and it is threefold, namely *Similar*, *Instrumental*, and *Common*.

XVIII. The Action of a part *Similar*, is hurt by a simple In-

temperature, as Heat, Coldness, Moistness, or Dryness; or composed as hot and dry, hot and moist, cold and dry, cold and moist, and that either with or without Matter.

XIX. The action of an *organick* or instrumental part is hurt by fault of Greatness, Number, Situation, Conformation, and Obstruction.

XX. A Disease *Common*, is the Solution of Unity or Continuity, by *Phlegmon*, *Scirrhus*, or *other Tumor*; as also by Ulcer, Wound, Fracture or Luxation.

XXI. So Intemperance is a *similar Disease*: Obstruction is an *instrumental Disease*, and Solution of Continuity, a *common*.

XXII. The *KINDS* are known by the Action hurt: so *Sleepiness* shews Cold and Moisture of the Brain; *Watching*, Heat and Dryness; *Pulse quick and unequal*, a Fever.

XXIII. The *Kind* is known by the Excrements, as Sand in Urine, shews Gravel; Blood by Stool, a Dysenteria; Spittle frothy Phlegm.

XXIV. The *Place* shews the *Kind*, for every Part hath its own proper Sickness or Disease; as we shall hereafter shew.

XXV. But for the yet better knowing of the Disease, consider its Antecedents, to wit, the Habit, Age, Sex, Country, Season, Air, and Form of Life: for one is soonest hurt with that Disease, which hath greatest Sympathy with his Nature.

XXVI. Yet notwithstanding, all

all sorts of Sickness, may befall all sorts of Persons, of all Ages, in all Places and Times; yet so as they generally sympathize with the Temperament, Place and Time, as in Epidemical and Pestilential Distempers.

XXVII. Lastly, the Kind is discovered by Application, for hot Intemperatures increase by using hot things; but diminish by using cold; and the cold contrariwise.

XXVIII. The CAUSE of the Disease is either internal or external: the internal is twofold, to wit, antecedent or conjoined.

XXIX. The Cause conjoined immediately produceth the Disease, and therefore is first to be sought out: see then whether it be Blood, Flegm, Choler, Melancholy, or Wind; or any thing else contrary to Nature, as Stones, Worms or Excrements, together with the Colour of the Place, Kind of the Pain, and sole

predominant Humour of the Body.

XXX. For when an inflamed part is red, it comes of Blood; when yellow, of Bile; but when cold and white, of Phlegm; when black, of Melancholy: the Pain also is moderate when it comes of Blood; pricking, when of Choler: Blunt, when of Melancholy; void of pain, if the Disease come of Phlegm or Wind, unless there be great Distention: the Colour or Substance of that which issueth forth, if it be a part of that which is contained, shews the Humour it comes of.

XXXI. Now consider whether the conjoined Cause be alone or with an Antecedent: if it proceed from fault of the part only, it is only the conjoined Cause, but if from Defluxion or the fault of the whole Habit, it is the Antecedent with the Conjoined, the which are next to be enquired into.

CHAP. XLIV.

The Diagnosis of a Plethory.

I. THE Antecedent Cause of Diseases is twofold. the one is called a Plethor or Plenitude: the other is called Cachymy.

II. A Plethorick Constitution is when all the Humours equally superabound; or Blood only.

III. The Signs are taken from

the Causes antecedent; as the Temperament of principal parts; Temperament of the whole Habit (by Chap. 37, 38, 39, 40, 41, 42.) Age, Season, Air, Climate, manner of Living, and Evacuations; as also Accidents, as Colour, Habitude, Functions Animal, Vital, and Na.

Natural; as Sleep, Dreams, Pulse, Concoction, and Excrements.

IV. Plethor is threefold, to wit, *Plenitudo ad vires*; *Plenitudo ad vasa*; and *Plenitudo supra vires*..

V. *Plenitudo ad vires* is, that in which the Blood, although it be not excessive, neither in quantity nor quality, yet overcharges the Spirits, and Powers of Nature.

VI. *Plenitudo ad vasa* is, when the Quantity surpasses the bounds of Nature; and it is either small, when it only fills the Cavities of the Veins, not much exceeding a mean: or else excessive, when through Fulness the Veins are ready to burst, yet notwithstanding Nature is not suffocated thereby, but the Power, Strength and Force of Nature, equally encreases with the Blood.

VII. *Plenitudo supra vires* is, when Blood abounding as before, the Strength is abated, the Body becomes heavy, lazy, and almost stupified, sleeping soundly, yet troublesomely.

The Signs of Blood abounding now immediately follow.

VIII. Signs of a **SANGUINE COMPLEXION**. The antecedent Causes are, first a temperate Heart and Liver; secondly Youth, thirdly the Season, as the Spring: fourthly Diet easily digested: fifthly a pleasant life, void of Care: sixthly evacuation of Blood, (natural or artificial) suppressed. The accidental or consequent Signs are, a middle stature, strong well composed Body, fleshy, but not fat, great Veins, smooth Skin, hot and moist in feeling, hairy Body, (soon having Beards if men) Cheeks red, or red and white, Hair of a blackish brown, or flaxen, great Appetite; good and quick Digestion, yellowish Urine, reddish Excrements, great and full Pulse, sleep well, dream of money, and pleasant things, being bold of Spirit, Venerial Merry, Cheerful, Bountiful, Pittiful, Merciful, Loving, Familiar and Courteous, little or nothing ever sticking to Heart.

CHAP. XLV.

The Diagnosis of a Cacochymy.

I. **C**acochymy is the Repletion of Flegm, Choler or Melancholy, and therefore is threefold, according as either of the three afore-

said Humours shall superabound.

II. The Signs are taken from the antecedent Causes (by Sect. 41. Cap. 3 but now only remain to be

be particularly treated of in the next three following Sections.

III. Signs of a FLEGMATICK COMPLEXION.

The Signs Antecedent are, first, the Habit, cold and moist: secondly, the Age, to wit, old Age, from fifty, to the end of Life: thirdly, the Season, which is Winter and moist Weather: fourthly, the Diet, cold and moist: fifthly, an easy Life, constantly sitting, or full of idleness: sixthly, sleeping after Meat. The Signs consequent are, middle stature, fat thick or gross bodyed, Veins and Arteries small, not hairy, little Beards if men, Hair flaxen or light brown, Skin whitish or pale, smooth, cold and moist in touching, Appetite and Digestion weak, Pulse little, small and soft, Urine pale and thick, Excrements of the Belly thin, Dreams of Water, Drowning, &c. slow in motion, dull, drowsie, sleepy, heavy, sloathful, cowardly and forgetful Creatures, the Spirit is stupid, Body lazy and slow in motion, not delighting to stir, shame-faced and sober.

IV. Signs of a CHOLE-RICK COMPLEXION.

The Causes Antecedent are, first Habit, hot and dry: secondly, the Age, from twenty to thirty five: thirdly, the Season, which is in Summer: fourthly, a Climate, hot and dry: fifthly, a Life full of Travel, Exercise, Anger, Care, Watching and Fasting: sixthly, Evacu- ations ordinary, by Vomit, Stool,

Urine) suppressed. The Signs consequent are, Heat and Dryness, Shortness of Stature, dry lean, Skin rough and hot in feeling, Body hairy, Hair redish, yellowish, and sometimes black, curling, Skin tawny or Sunburnt, and swarthy, little hollow Eyes, strong Concoction, digesting more than the Appetite calls for, Pulse swift and strong, Urine yellow and thin, a body usually costive, sleeping little, and dreaming of Fire, War, and Quarrels, Sense lively, quick Wit, bold, furious, quarrelsome, hasty, eloquent and stout, being given to quarrel, jest, scoff and lye.

V. Signs of a MELANCHOLY COMPLEXION.

The Signs Antecedent are; first, Habit, cold and dry: secondly, Age, from thirty five to fifty: thirdly, Season, Autumn, cloudy Air, cold and dry: fourthly, Diet, of brown heavy Bread, old Cheese, Hogs Flesh, Hares Flesh, Venison, chiefly being salted: fifthly, Life sad, contemplative or studious, without Recreation, and Exercise of the Body: sixthly, the usual Evacuation (by the Hemorrhoids, monthly Courses, Medicine, &c.) suppressed. The Signs Consequent are, Cold and Dryness, thin Body, not very tall, of a swarthy or leaden Colour, rough Skin, cold and hard in feeling, little or no Hair on their Bodies, being long without Beards, if men, and sometimes Beardless; Hair of the Head brown, Appetite is better than the Concoction, Urine pale, ordure, clay

colour, Pulse deep and slow, they dream of fearful things, Blackness, Darkness, Tombs and Sepulchers; are covetous, Cowards, fearful, careful, solitary, lump-

ish, stubborn, obstinate, ambitious, envious, of profound thoughts, mistrustful, spiteful, retaining Anger long, and aiming at high things.

CHAP. XLVI.

Of Mixed Complexions.

I. Sanguine Flegmatick Complexion. These are taller than Sanguine, having strong well set Bodies, not very fat, Hair light brown or flaxen, Skin smooth and a pale red, not much hairy, Pulse moderate, Appetite good, Urine subcitrine, egestion, whitish or reddish, Dreams Aery, of Flying, Rain, Waters, &c. these are not so liberal, bold and free, as Sanguine.

II. Flegmatick Sanguine Complexion. These are of mean stature, gross fat bodies, soft smooth Skin, cool in touching, not hairy, something long without Beards, Hair light, yellow, brown or flaxen, not curling, pale colour, weak Digestion, small, low Pulse, pale Urine, dreaming of falling into Water; being not merry nor sad, nor free nor covetous, but something fearful.

III. Sanguine Melancholy Complexion. These are of strong well composed Bodies, fleshy, but not fat, big Veins and Arteries, smooth Skin, yet a little hairy, Hair black, or blackish brown, Cheeks red, Pulses great,

Urine yellow, Digestion good, Egestion redish and thin, Dreams Aereal: being pleasant, merry, and free, but with Gravity, Discretion and Sobriety.

IV. Melancholy sanguine Complexion. They are tall, yet big, fleshy and strong Bodies, Face of a darkish red, Skin neither hard nor rough, but temperate in respect of Heat or Cold, not very hairy, Digestion good, Urine of a light Saffron colour, Dreams pleasant, being more free, bold and cheerful than Melancholy Persons, but gentle, sober, patient, trusty, and courteous.

V. Choleric Melancholy Complexion. They have little lean Bodies, rough hard Skin, meanly hairy, almost temperate in feeling, swarthy colour, Hair of a Chestnut brown, Digestion good, Pulse mean and slow, Urine pale, yellow and thin, Excrements yellow and hard, they Dream of Falls, Hurts by Fire, Fightings, &c. are quick witted, good Students, eloquent, prodigal, beginning many things before they finish one.

VI. Me-

VI. Melancholy Cholerick Complexion. They are tall, yet slender and dry Bodies, Skin rough cold and hard, little Hair on their Bodies, long without Beards, many Excrements at Nose, Face swarthy, Hair of a blackish brown, Digestion weak, Pulse slow, Urine subcitrine, Egestion pale, dreaming of idle and fearful things: they are gentle, modest, grave, bashful, constant and faithful, being excellent Students.

VII. Cholerick Flegmatick Complexion. They are strong lusty Bodies, well set Creatures, not fat nor lean, great Bones, hairy Skin, Hair yellowish or sandy, Face tawnyish, Digestion good, Pulse swift, Urine yellow and

thin, Egestion yellow and hard, they dream of Fighting, Lightning, Rain, Water, &c. being something more sober and mild than Cholerick men, they have a good Wit, and grave Discourse.

VIII. Flegmatick Cholerick Complexion. They are tall, lusty, fat, and well set; Bodies hairy, some have Beards, Hair of a Chesnut Colour, smooth and soft, Face Sun-burnt, or rawny red and full of Freckles, Appetite and Digestion good, Pulse great, Urine subcitrine, Egestion pale yellow, they dream of Water, Rain, Swimming, being nimbler, bolder, kinder, merrier and acuter than Flegmatick persons.

CHAP. XLVII.

Of External Causes: where, of the Solution of Unity.

THE primitive or external Causes, called of the Greeks, *Procatartick*, point at the external Cause, as well as at the Disease; For,

II. Too hot Air, Meat, Drink, Watching, violent Motion, Anger, Suppression of Excrements, engenders hot Humours and hot Diseases.

III. Too cold Air, Meat, Drink, Sleep, Idleness, Fear, immoderate Evacuation causes cold Humours and cold Diseases.

IV. Dry Diseases usually accompany the hot Causes; moist the cold: for Heat generally brings with it Dryness; Cold Humidity, because it is the Mother of Crudities.

V. Inquire therefore concerning all the six Causes, which Physicians call non-natural, to wit, *Air, Exercise, Rest, Food, Excrements, and Affections*; and learn if he hath committed any excess in any of them; or, if he hath weakened himself by

Venericals; or in Women, if their Courses be stopp'd, or in men if the Hemorrhoids: for the Knowledge of these things give great light, both of the Cause of the Disease, and of the Cure.

For if the Disease should come of Evacuation, it would not be good to purge, or to bleed (although in a Fever) but contrariwise, by Analepticks to repair the Strength, and to restore Nature.

VI. The last External Causes are either by Falls, Blows, or Cuts: from whence comes the Solution of Unity (by Sect. 4. Chap. 37. and Sect. 20, 21. Chap. 43.) which is either a Wound or a Rupture.

VII. A Wound is either new or old: new is without putrefaction, and is either simple without accidents; or compound with accidents, as Bruise, loss of Substance. Tumour, Swelling, Inflammation, Pain, Convulsion, &c. and it is either in Parts principal or not principal, seminal or not seminal; being either great or little; hard or easie to cure; dangerous only or mortal.

VIII. An old Wound is called

an Ulcer, which is with Putrefaction: and it is either plain, hollow, fistulous, sanious, cancrus, virulent or corrosive: being accompanied with Pain, Swelling, Inflammation, Hardness, Callous, proud Flesh, straight Lips, Worms, Bones corrupted, and Distemper of the parts adjacent.

IX. A Rupture is twofold, to wit, either *fractura ossium*, the breaking of Bones, or *Ramex intestinorum*, commonly called *Hernia*: *fractura ossium* is evident, and needeth no signs: *Ramex* is fourfold, namely, first *Hernia Inguinalis*, a Rupture of the Bowels above the Privy members: secondly, *Hernia Aquosa*, a watery Rupture, when Humours are gathered in any part of the Skin, or Films of the Coats: thirdly, *Hernia Carnosa*, a fleshy Rupture, when hard Flesh grows within the Coats and Tunicles of the Stones: fourthly, *Hernia Peritonæi*, a Rupture of the *Peritonæum*, when the Bowels fall into the Coats. Some Authors make more differences, but these are chief,

CHAP. XLVIII.

Of the Diagnosis of Tumors.

I. A Tumor or Aposteme is an Affection befalling the Organical parts, encreasing their Magnitude above Nature, through superfluous Humors.

II. They are caused through Fluxion or Congestion.

III. Fluxion is the falling down of a Humour to some certain part, (either through

traction or Transmiffion) offending it by Quantity or Quality.

IV. Congestion is, when a Humour is collected by little and little, either from the Weakness of the Concoction, and expulsive faculty, or from evil Diet.

And these are more tedious in breeding than the former: for those which come by Fluxion, are with great pain, redness and beating, coming suddenly to a height.

V. The Causes of Tumours are three, to wit, *Primitive Antecedent and Conjunct*.

VI. The *Primitive* Causes are external, as Falls, Blows, and the like, which move the Humours: as also great external Heat; Food taken too raw, or cold; or in excessive Quantity.

VII. The Causes *antecedent* are internal, as Humours offending either in Quantity or Quality, Intemperature, Weakness and Pain.

VIII. The *Conjunct* Cause is matter gathered together in the place, by reason of the aforesaid Causes.

IX. The general Sign, is Swelling in the Part, offending the Action; causing it to differ from the others like parts.

X. The *Kind* of the Tumour is known by the Colour, Intemperature, Hardness, Softness; Pain and Continuity of the Fluxion.

First, If it be red, it comes of Blood: if white, of Flegm: if yellow of Choler: if black, of Melancholy. Secondly, if it be hot, it

comes of Blood and Choler: if cold, of Phlegm or Melancholy. Thirdly, hardness with pain, shews Phlegm: without pain, a Melancholy Scirrhus. Fourthly, softness with pain and redness, a Phlegmon: without pain and redness, Oedema.

XI. The chief of those Tumours which proceed from Blood, are Phlegmons, Bubo, Carbuncles, Gangreens and Gutta Rosacca: from Choler, Erysipelas, Herpes, Itch, Measles, and Impetigo: from Flegm, Oedema, Seruma and Ganglion: from Melancholy, Scirrhus, Cancers, Scabs: Leprosy, Warts and Corns.

XII. Φλεγμων, Phlegmon or Inflammation is a Tumour, red, Shining, inflamed, hard and very painful, oftentimes accompanied with a Fever, and happening generally in the soft fleshy parts.

It often follows Wounds, Fractures, Blows, &c. if it be from Blood alone it is perfect: but if it proceeds from a mixture of Blood with Choller, Flegm, or Melancholy, it is called Phlegmone Erysipelotoides, Oedematoides, Scirrroides. The Antecedent cause is Obstruction, and things breeding Obstruction; the conjoyned cause is Blood, or other Humours mixed therewith obstructed: from whence follows a fermentation of the humors in the part assisted, with an hot effervescency, causing commonly Corruption and Putrefaction.

XIII. Βύβων Bubo is a Tumour and Inflammation of the Glandules chiefly the Kernels

of the Arm-pits, or Groins painful hard and red.

A Bubo is either critical or symptomatical: the critical is safe and healthful, and they are such as follow the declining of any sickness, as Feavers, &c. The symptomatical are either venereal or pestilential, and these shew from whence they proceed.

If a Bubo is little and not painful but easily brought to Maturation, it is called Phyma: where it is mixt most with Choler it is called Phygeton: if it be in the Arm pits, it is named Panus: behind the Ears Parotis: if contracted from impure Coition it is called Venereal. The Signs in general are Pain, redness, heat, Pulsation, tension, and sometimes a Feaver.

XIV. Ἀνθράξ, Carbunculus, a burning coal, is a Tumour proceeding from adust, thick, and inflamed Blood, degenerating into black Choler, and burning the part: or it is a pestilential Tumour inflamed, black, burning the place, and sometimes blistered, as if burnt with fire, accompanied with great Inflammation and Pain, Vomiting, Trembling, Sleepiness, cold Sweats, and Feavers.

The Greeks call it Anthrax, the Latins Ignis Perficus. Some Authors would make a difference between Anthrax and Carbunculus, but there is none. The cause is from burnt blood assuming the nature of Melancholy, and so apt to corrupt. There is sometimes but one great pustle, sometimes many little ones, which being opened ap-

pear black, and inflamed round: the crust being removed, instead of Corruption or Matter, you will find spongy flesh, the part is very painful, with a Feaver and Watching.

XV. Ἐχθύμωσις, Gangrena is a Mortification of the part by little and little through violence of much inflamed matter and Blood, which so stop the passages, as that the natural heat cannot have recourse thereto: if it come of Inflammation, the red Colour, Pain, Sense and Beating decays; waxing pale, livid, black and soft, yielding to the Fingers, without rising again.

Echymosis is a Mortification, either in beginning called Gangrena: or perfect called Sphacelus. It commonly follows a Phlegmon or Inflammation ill cured. It is caused 1. From external cold, or repellers. 2. External heat, Burners or Corrosives. 3. Defect of Nutriment. 4. Stoppage of the Pores, (as in spitting and rolling fractures) whence comes suffocation of the natural heat. 5. Malign humours. 6. The Scurvy, which by a peculiar property sometimes causes a Mortification. In a Gangreen the part begins but to dye, nor is the sense totally abolished, but the skin is in a manner red, and without any vehement ill scent. In a Sphacelus (called also Necrosis and Syderatio) the part looks first pallid, after livid, then black, the flesh is spongy, great stink, sense, heat, and pulsation is vanish, and the parts are altogether dead. A

Gan-

Gangreen proceeding from Cold has great pricking, first 'tis red, then pale, then black: if from external heat, or stoppage of the Pores, the redness turns to a whiteness, pain and pulsation ceases, and pustles appear, from whence Issues a Gleet humour. If from defect of Nutriment, it for the most part seizeth on the joynts, the part waxes cold, without pain, inflammation or tumor. If from Venemous Creatures or humours, there is fainting, great pain, always a Fever, and oft times a Frensey, with a little pustle, under which appears a black spot, spreading it self over the whole part. If from the Scurvy, it for the most part begins in the toes, with blackish spots or lines, degenerating into a dry Crust, with numbness and at length Mortification.

XVI. *Gutta Rosacea*, is a redness of the Face, occasioned from many little Pustles, infesting the same: it proceeds of thick, salt and inflamed Blood, bad Diet, Drinking, and Stoppages of the Terms or Hemorrhoids, &c.

Sometimes there is a tuberculous redness of the skin, representing these coloured spots.

XVII. *Ἐρυσίπτελας*, *Erysipelas*, *Antonis facer*, *Antony's Fire*, is a humour springing from cholerick Blood, chiefly affecting the Skin, accompanied with great inflammation and pain: it seldom comes to Ripeness, appearing oftentimes in the Neck and Face: the Colour is not perfectly red, but mingled, and somewhat pale, and

generally accompanied with a great Fever.

It is known by great heat, sharp pain, redness mixt with yellowness easily giving way to the touch, but as suddenly returning, swelling or extension small, pulsation little, always joyned with a Fever, unless it proceed from an External Cause: 'Tis caused of Choler alone, and sometimes mixed with other humours: if of Choler alone, it is a perfect *Erysipelas*; but if the Choler is mixt with Blood, Flegm, or Melancholy it is imperfect, and accordingly is called *Erysipelas*, *Phlegmonoides*, *Oedematoides*, *Scirrroides*. Sometimes an Ulcer may be joyned with it, which may consume the skin only, or the flesh and skin both.

XVIII. *Ἐρπης*, *Formica*, the Shingles is a cholerick Tumour, pure and unmixt with other Humours, creeping upon the surface of some part of the Body, from place to place, broad, and after a circular manner, the middle parts healing, while farther it breaks out a fresh.

Ἐρπης ἀπὸ τοῦ ἑρπεὶν ἀ σέρπεντο, is either perfect, proceeding solely from Choler, and is called *Herpes exedens*, A disease called by some the Wolf: or imperfect proceeding from Choler mixt with Flegm or the Serum of the blood, called *Herpes Miliaris*. They are known by breakings out of Pustles like to Millet seed, a heat, itching, and after rubbing a moistness with little Ulcers.

There is, I think, but little difference between these *Herpes* (wherein Choler is mixt with the Serum of the blood) and *Phlyctæ-*

næ, which are little Blisters in the skin, like such as come of scalding, which when they break a yellowish matter comes forth, I conclude the Phlyctænæ to be the latter.

XIX. *Κνισμός*, Pruritus, the Itch, is a Disease which cauſeth scratching, with some small Exulceration of the Skin, generally affecting the whole Body, it comes of Choler, thin and salt Phlegm:

It will have its beginning in many parts of the body; in children it often begins on the fingers, or between the fingers: but if it begins upon other parts first, it forthwith sends its filthiness thither.

XX. *Ἰσθμια*, Sudamina, the Measles are Pustles like Millet-seed, which seize the Skin, affecting generally Children; they come from cholerick matter restrained.

They are often accompanied with a deep redness, and the patient has a Fever. The difference between the Small Pox and the Measles is this: in the first, the Pustles are greater and as big as warts, which ulcerate and break: but in the latter viz. the Measles, the pustles are much smaller, very red, and generally discussed in 5. or 6 days without suppuration, being best perceived by feeling.

XXI. *Λειχήν*, Impetigo, a Ring-worm, is a hard red Pustle upon the Skin, spreading it self round, with Dryness, Roughness and great Itching: it comes from a thin, sharp and cholerick Humour.

If there be a mixture of Melancholy, it degenerates either into Elephantiasis or Cancer.

XXII. *Οἰδῆμα*, Oedema, is a flegmatick Tumour, soft, cold and white; in pressing it there remains a hole, it is almost without pain, and happens in the Glandula's, extremities of the Face, Legs and Feet, chiefly in cold Weather, old People, long Sickness, and such as be full of Humours.

It is perfect when it proceeds from Flegm, Imperfect, when mixt with other humours, as Blood, Choler, Melancholy, whence they are called Oedema, Phlegmonoides, Erysipelatoides, Scirrroides. It is generally caused from the evil disposition of the Lymphæducts.

XXIII. *Χειρῶδες*, Strumæ seu Scrophulæ, the Kings-Evil, is hard Kernels contained in their proper Cistis or Films, chiefly appearing in the Neck, Arm-holes, Hands, Feet, Elbows, Eyes, Spinadorfi, &c. they come of Flegm alone, and sometimes mixt with Melancholy.

They are sometimes moveable, sometimes fixt, sometimes but one, sometimes many. They are hard and inequal, but seldom discoloured and painful. They are caused from gross and raw juices, sent to the Glanduls which are those called Conglobate, in which the Lympha is generated, and from whence the Lymphatick Vessels do proceed; or those, called Conglomerate; in which a peculiar Liquor is generated, conveyed not into the common passages, but unto those which are particular, ending in their own appointed Cavities, as the Salivals on both sides the Mouth cast into; the

the pancreatick Juyce by the pancreatick passages, into the small Guts.

XXIV. Γάγγλιον, Ganglion, Lupia, a Wen, is a flegmatick Tumour generally happening in places, having little Flesh, dry and nervous, being sometimes hard, sometimes soft, commonly round.

Some suppose them to be caused from the too much openness of the Mouths of the Arteries, (which are appointed to carry nourishment to the Muscles) by reason of falls, Blows, or other causes in Plethorick people, where the natural heat turns the extravasated Blood into flegm, producing a preternatural Tumour: Choler produceth pain; Flegm, Viscousness; Melancholy a gristly hardness; and so accordingly the colour is Yellow, White, or Livid. Ganglion, properly so called is contained in a Cistis, but Lupia seldom, unless Flegm be the greatest cause, and then they are generally in the neck.

XXV. Σκίρρῳ, Scirrhus, is a Melancholick hard Tumour without pain or feeling, engendered of Cold, and such Meats as breed a Melancholick juice: it is hard and grows slowly being of a pale or livid Colour.

Sometimes it is generated of Flegm, sometimes of Melancholy, sometimes of both, being hard and not yielding to the touch. It is perfect if it comes from Flegm, or Melancholy alone, Imperfect, when they or other humours are mixt with it: if it comes of Flegm 'tis commonly white of Melancholy Livid. It differs from Cancer

chiefly in this, that it is void of pain.

XXVI. Καρκίνῳ, Cancer is a hot hard round Tumour blew or blackish, having pain and beating: it grows sooner than Scirrhus with great Veins about it, full and swelling much like Crabs feet, springing from Melancholy; with an eating and gnawing Pain; chiefly in the Night between nine and four in the Morning; if it be broken, it voids a virulent matter, much like the thin Dregs of Claret Wine, being filthy, fordid, stinging, hard unequal, cavernous and hollow.

If it be not exulcerated, it is called by the Greeks Carcinoma, but when Ulcerated Phagedæna, which is the Disease truly called the Wolf, though some mistake it, and call a Herpes exedens by that name. In the beginning 'tis difficulty known, being scarce so big as a Pea; then increasing sometimes slowly, by pain, and its other evident symptoms it discovers itself, but it grows till it is as big as an egg, a mans fist, or bigger.

XXVII. Ψώρα, Scabies, Scabs are Tumours rising from corrupted Blood, with Soreness and Exulceration of the Skin.

They are divers according to the parts they affect: in the head they are called Achor, Tinea, Favus, Porrigo, a Scald: in the Face Vari: in the Hands Sirones: In other parts of the skin Phlyctenæ, & Ephelides, &c.

XXVIII. Ἐλεφαντίασις, λέπρα, Lepra, the Leprosy is that which affecteth the whole Body or a part there-

thereof with Scurff like Scales, making it red, rough and unequal: a Tumor possesseth the place where it is; it augments by little and little without pain; the Eyes are red, Breath stinks, the Skin scurfy, knotty and hard, the Hands and Fingers swell, the Feet grow deformed, and the whole Body turns into a Consumption.

There are two sorts of Leprosy, the one called *Lepra Græcorum*, which is general all over the whole body: the other *Elephantiasis*, *Lepra Arabum*, the Leprosy of the Arabians, affecting one part only, chiefly the feet: It arises from Melancholy Pituitous Blood, Tumid, Livid, black, with Ulcers and Varies in the Leggs.

If it possesseth the Skin only, and not the Flesh, it is called *ἄλζο*, *Morphea*, *Morpheus*.

XXIX. *Θύμω*, *Verruca*, a Wart, is a little Tubercle on the Skin, resembling the Flower of Time, proceeding from a thick flegmatick and melancholy juice.

Some have slender roots, some broad.

XXX. *Ἥλας*, *Clavus*, a Corn, is a round callous Wart, of a whitish Colour, infesting the Feet and Toes, thereby causing pain in going; they come from Bruises, or straitness of Shoes.

To which add, a Melancholy or Pituitous matter, or the superfluous of an Excrementitious juice, separated from that which nourishes the skin.

XXXI. *Φλυκταίναι*, *Phlyctenæ oculorum*, Blisters of the Eyes, which the Arabians call *Bothor*, are little Tumors like Gromwell seed, happening in the White of

the Eye, viz. in the *Cornea* and *Adnata*, being full of Water, proceeding from a sharp Humor, which being broken there follows an Exulceration. Those in the *Adnata* are red: those in the *Cornea* blackish if outwards, but white if inward.

XXXII. *Anchylops* is a Tumor in the great Corner of the Eye near the Nose: it is either with or without Inflammation: if not broken it is called *Anchylops*: but if inflamed and broken it is called *Agylops*. When it is inflamed, it is like a small *Pblegmone*, red about with a shooting pain: otherwise it proceeds of a thick Viscous humour like Honey, painless, and included in a *Cistis*. *Agylops* is from Cholerick Blood being moveable with pain, and change of colour.

XXXIII. *Parotis* a kind of *Bubo* happening behind the Ear, It is either Critical or Malign: the Malign is either pestilential or Venereal. They are known by a violent beating, pain, redness extending to the Jaws and Temples with a heat and Fever, sometimes with Frenzy, Convulsions, Soundings and Coldness of the extreame parts. The cause is from thin Cholerick Blood or Serum called *Lympha*.

XXXIV. *Polypus* is an Excreescency of Flesh, growing with small roots, spreading and hanging down to the lower part of the Nose, like the Fish call'd *Polypus*, whence came the name: some call it *Noli me tangere*. The Flesh is soft, sometimes white, sometimes red and blew: growing big, it hangs out at the Nose: if

if it grows to the highest part of the Nose, it sometimes hangs down to the Pallet, stopping the Passages which may be seen behind the *Uvula*: at a Southern Wind, and the Full Moon it is much swelled; but Northern Winds, a dry time and the new Moon diminishes it: if it grows in the Nostrils towards the lower part of the Nose, without any certain shape, but like the proud flesh of an Ulcer, it is called *Saycoma*: they are both caused from a gross slimy humour, coming from the Brain, mixed with blood, or Melancholy, or both. But if there be a mixture of Melancholy, it often degenerates into *Cancer*.

XXXV. *Paronychia* in Greek, *Panaritium* in Latin, a *Felon* in English, is a very painful Tumour arising at the Fingers ends from a thin sharp, malignant humor sometimes with Cholera often corroding the *Tendons*, *Nerves*, *Periostion* and *Bone* it self. There is heat, redness, and an intolerable pain about the Nail, tormenting the Patient Day and Night; the more Malign the Humors, the greater are the Symptoms; sometime the pain of it extends over the whole Arm, sometimes with a *Fever*, and sometimes a *Delirium*.

XXXVI. *Cheratoïdes*, *Glandulatosus*, Glandulous tumor, almost like to the Kings-Evil: There are four principal Kinds of them, 1. *Broncocele* a Tumour in the Throat (included in a *Cistis*) proceeding from preternatural Flegm mixed with Wind. 2. *Atheroma*, a Tumour præternatural (contained in its proper

cistis) having a matter like soft past, or flower and water sodden together, without pain, of the Colour of the Skin, not easily yielding to the Fingers, nor when they are removed suddenly swelling out again. 3. *Steotoma* is a Tumour præternatural (contained in its own proper *Cistis*) having a matter like Suet, of the same Colour, and soft: it comes from a small beginning, and by degrees increases, and yeels to the fingers much as the former. 4. *Meliceris*, a Tumour præternatural (included in its proper Tunicle) having a matter like Honey, without pain, round, easily yielding to the Fingers, and returning again to its own form. The general cause of these Tumours is extravasated Flegm, proceeding from its natural property, which sometimes, though seldom, is mixt with Melancholy: These Tumors if in the Joynts are called *Ganglia*: if in the glands of the Neck, *Glandula*, *Scrophula*, or *Struma*; if in the Arms, Legs or Head, *Tubercula*: if from the Pox *Tophus*.

XXXVII. *Aneurisma*, is a præternatural tumor, from the Rupture of an *Artery*, with continual Pulsation or beating, easily yeelding to the Fingers, and as easily returning again: it is of the colour of the skin, and if pressed, returns with a noise or murmuring, like boyling water, growing from very little by degrees. The *Arteries* are composed of a double *tunicle* (except those dispersed through the Brain and upper parts) the innermost of which, being corroded or broken, may cause an *Aneurisma*.

rism (what ever some may say to the contrary) but if the tumor be as big as ones fist, that must be with a Rupture, of both the Coats. It may also be caused through the unskilful cutting of an Artery asunder, where the external coat being united with the Muscles, the internal by reason of the pulsation remains open.

XXXVIII. *Varix*, is the dilation of a Vein, which may happen in many parts of the Body, chiefly of the Thighs and Legs: it is known by the largeness, thickness, swelling and colour of the Veins, which are something blacker than formerly, soft, easily yeelding to the fingers, and as soon returning again; It often happens to men of a Melancholy temper, women with Child, and such like. It is caused from the falling down and weight of thick melancholy blood, falls, or some violent Exercise.

XXXIX. *Emphysema, Inflatio*, seu *tumor flatusus*, is a swelling, proceeding from Wind, not pitting, yet yeelding to the Fingers, which if shaken makes a rumbling noise: it is caused either from too violent and unnatural heat rarifying the humours, or a mixion of Flegm with Choler, which causing a fermentation, produceth that Wind, this generally following a debility of the part. It is either with, or without pain; in the one the Wind is quiet, in the other in motion.

XL. *Tumor Aquosus*, A watery Tumor, is a collection of a watery humour without pain, yeelding to the Fingers and yet suddenly returning again: It is either *Hydrops*, which is a general collection of watery matter, and is threefold, viz. *Anasarca*, *Afcitis*, and *Tympanites*, of which we intend nothing here: or a particular gathering of Water in the head called *Hydrocephalus*: in the Breast, called a *Dropsy* of the Lungs: in the Navel, called a *Hydromphalos*: in the Cods, called *Hydrocele*, &c. It is caused from Serum or Salt water, produced from the lost heat of the parts that serve to making of Chyle and Blood. It is softer than *Oedema*, and is known by its easy yeelding to the Fingers, being painless and a little Itching; and if it be lookt on by candle light, it is very shining.

XLI. *Apostema, Abscessus*, an Impostume is a Tumor arising from corruption and putrefaction, chiefly in the end of a Disease, and in or neer the Glands; as behind the Ears, in the Neck, under the Arm-holes, or in the Groin, being repleat with a preternatural humour, most commonly included in their own membranes, yet sometimes not, if they proceed from *contusion* or other external hurts, whence follows inflammation of the part, a Fever, and then a generation of Corruption, whence comes an *Abscess*.

CHAP. XLIX.

Of the Diagnosis of Wounds.

I. **A** *Wound* is the Solution of Continuity or Unity, new, Bloody, and without Putrefaction.

II. If it be made with a *pointed Instrument*, it is called a *Stab*: if with a *Sword* or the like, a *Cut* or *Incision*: if with a *Blow*, a *Contusion*.

III. *Wounds* are either Simple or Composed.

IV. A Simple Wound is with out Contusion or loss of Substance; a Composed with one or both.

V. If the *Brain* or its *Membranes* be wounded, Blood comes forth by the Nose and Ears, with vomiting Choler; a voiding of Excrements, a ghastly Face, Senselessness, with a Fever; and within three or four days Convulsion and Raving.

VI. If the *Heart* be hurt, there cometh forth Blood thick and black, Pulse weak, Face pale, universal Trembling, cold Sweat, Soonding, and in short, Death.

VII. If the *Lungs* be hurt, they breath with difficulty, void frothy Blood at the Mouth, and the Wound, they rave having a high Colour.

VIII. If the Membranous part of the *Diaphragma* be hurt, the Flank draws up, Pain is in the middle of the Back, Difficulty of Breathing, Coughing, sharp

Fever, Raving and Death: but in the fleshy part there is hope of recovery.

IX. If the *Breast* be wounded, the Air comes out at the Wound; and the Patient finds the Taste of things applyed to the Wound in his Mouth.

X. If the *great Veins* and *Arteries* in the Breast be hurt, an immoderate Flux of Blood, Want of Sense, cold Sweat, Soonings and Death within few hours.

XI. If the *Stomach* be wounded, there follows Vomiting, Swounding, Fainting, and Death.

XII. If the *Recurrent Nerves* be hurt, there follows loss of Speech, Sense and Motion, without recovery.

XIII. If the *Liver* be hurt, there is Vomiting, Flux of Blood, Pain, continual Fever, Raving, Convulsion, cold Sweat, and at last Death.

XIV. If the *Spleen* be hurt, the same Symptoms appear only on the contrary side.

XV. If the *Intestines* be hurt, the Excrements come through the Wound.

XVI. If the *Reins* or *Kidneys* be hurt, there is Suppression of Urine, Pain in the Groin and Stones, pissing Blood, great Swelling, and danger of Death.

XVII. If

XVII. If the *Bladder* be hurt, the same Symptoms appear unless the nervous part be hurt, then Vomiting, voiding Urine at the Wound, loss of Sense, and lastly Death.

XVIII. If the *Marrow of the Back Bone* be hurt, there is a Convulsion, which takes away Sense and Motion, senseless Evacuation of Excrements, Putrefaction, and Death.

XIX. If a *Vein* be hurt, it bleeds thick and red Blood: if an *Artery*, then yellowish, thin, hot Blood, flying out, and leaping with violence by *Secl. 10. Chap. 43.*

XX. If the *Womb* be hurt, there is great pain in the Hips and Thighs, and a Flux of Blood, with loss of Speech, Reason and Sense, and at last Death.

XXI. The Symptoms of a Wound are, 1. a *Feaver*. 2. *Inflammation*. 3. An *Erysipelas*. 4. An *Hemorrhage*; which not only hinders the Cure, but also weakens the body, and brings Death, if it be not suddenly stopped; which in the greater Vessels especially the *Arteries*, is very hard to do, for which cause those Wounds are for the most part mortal: Since Medicines which stop Blood are too weak, and hard *Ligature* may occasion a *Gangreen*.

XXII. A *Wound of the Nerves* is known, 1. by *Anatomy* (from the place) which shews in what members the Nerves are inserted. 2. *From the great pain*, causing Pulsation, Inflammation, Convulsion and Frenzy; except the Nerve is transversely divided, and then the Symptoms are not so grievous.

XXIII. A *Wound near the Joints* gives fear that a *Tendon* is hurt, because the *Tendons* terminate near the Joints.

XXIV. A *Poisoned Wound* is known by vehement pain, a Livid colour, becoming suddenly black, Symptoms more violent than might be expected for the Quality of the Wound, burning over the whole Body, Fainting, Trembling, Frenzy, &c.

XXV. *Wounds of the Brain* are accompanied with Pain of the *Meninges*, with a great Flux of Blood, and other evil Symptoms, if not Death it self.

XXVI. The biting of a mad Dog is accompanied with Anger, Complaining, Vertigo, Distention of the members, foaming in the Fits, gnawing of the Stomach, abhorring of Meat and Drink, fearfulness of Water.

XXVII. *Gunshot Wounds* are accompanied with Contusion, Pain, Inflammation, Trembling, Convulsion, and sometimes *Gangreen* and *Sphacelus*.

XXVIII. If the *Arteries* be Wounded, the Blood is yellow, hot, thin, flows forth Violently and with Leaping.

XXIX. In *Wounds of the Gullet*, there is difficulty of Breathing and swallowing, with Hiccup and Vomiting, Cholera, Meat and Drink.

XXX. The *Lungs Wounded*, the Blood Issuing out is yellowish and frothy, with a Cough, difficulty of breathing, and pain on the wounded Side, yet lying thereon, there's more ease.

CHAP. L.

The Diagnosis of Ulcers.

AN Ulcer is the Solution of Unity, putrified: or *thus*, an Ulcer is a Wound which is putrified, and sends forth stinking and putrified Matter.

II. *Ulcers* differ in Nature and Substances in Quality and Figure, and in Accidents.

III. By Nature and Substance some are simple, in the Flesh; others are composed with Inflammation, Corruption, Mortification, Nodosity, &c.

The *distemperature* is fourfold, from Heat, Cold, Moisture, and Dryness. In a *hot Distemperature*, the matter is sharp, the edges of the Ulcer red, and the pain great. In a Cold, the edges are soft and white, and if it be an evil Ulcer Livid. In a moist, the flesh is soft and loose, often increasing a great quantity of matter. In a Dry, the edges are dry and hard, with little or no matter.

IV. By Figure and Quantity, they are either round or long; deep or shallow; great or small.

V. By Accidents, some are fætid, virulent, hollow, putrid, coethick, cancerous, fistulous.

VI. The Causes of Ulcers are threefold, as are the Causes of humours, at Sect. 5. 6, 7, 8. Chap.

3. viz. I. External called Primitive, as Falls, Blows, Burnings,

Unnatural Food, &c. 2. Internal, or Antecedent, of sharp and corrosive humours, as Serum, Salic Flegm, Cholera, Melancholy. 3. Matter gathered together in the place, by reason of the aforesaid Causes, which is called the Con-junct Cause.

VII. If the Flesh about the Ulcer be dry and senseless, it becomes a Callous: and that Hardness is called Callosity.

VIII. That which comes forth of the Ulcer, is called Pus, Sinies, or Matter, which is the Corruption which Nature cannot digest: and it is twofold, to wit, good or evil.

IX. That is good or commendable, which is white light, equal in Body, not thick nor thin.

X. That is evil which is much altered (through unnatural Heat) from the former.

XI. Pus or Sinies, thin, sharp, corrosive or ill coloured, is called Virus: if gross, thick and evil coloured, as green, blew, black, livid, &c. it is called Sordes.

XII. Putrefaction of a Part, is the Change thereof from Life to Death.

XIII. And it is twofold, to wit, in Gangrena and Sphacelo.

XIV. Gangrena is a Mortification only of the Flesh and its appendices: Sphacelus is a real

Mor-

Mortification of the whole Member, both Flesh and Bone.

XV. An *Ulcer sanious*, is a simple Wound corrupted, without additions of other Symptoms.

XVI. An *Ulcer virulent* or *depascent*, is that whole malign Humour eats and corrodes the Flesh, going deeper and deeper, and is caused of evil billous Humours, sharp and biting, which by reason of their burning Quality, attract a certain Venomosity and Malignity. If it spreads and grows deeper, it is called *depascent*: if with *Putrefaction*, it is called *Nome*: if without, *Phagædæna*: if only in the Skin, *Herpes*: if from evil humors, *Cacoethe*.

XVII. An *Ulcer cavernous* or hollow, hath the mouth of the Orifice straight, and the bottom broad, with many Caverns therein, some right, and some oblique, without any hardness or callosity, and therein differ from *Fistula*'s: by a Wax Candle the Caverns are found out.

XVIII. An *Ulcer putrid* or rotten, is that which is accompanied with abundance of Matter, thick, tough and evil coloured, putrifying and rotting the Flesh.

XIX. An *Ulcer cacoethick*, or difficult to cure, is caused through a *Plethory*, or a *Cacoehymy*: it is known by its unresistable running, Malignity of the Humour, Callosity and tumified Hardness of the Lips, thin and evil coloured Sanies; together with its often healing and breaking out again.

XX. An *Ulcer cancerous* is horrible to look to, round Orifice, Lips thick, hard, inequal, sordid and turned over; it is hollow, ill scented, of a livid obscure Colour, accompanied with many Veins full of melancholy Blood, Matter virulent, subtil, watery, black or red, with terrible pricking pain.

XXI. An *Ulcer fistulous* is deep, straight, round, cavernous with a great Hardness and Callosity, from whence comes an Humour stinking and virulent, proceeding of *Flegm* and melancholy adust, generally void of pain, unless it be near a Nerve.

Fistula's are either, *straight*, *oblique*, *simple*, or *manifold*, that is having many hollows, some going to the *Nerves*, some to the *Tendons*, some to the *Veins* and *Arteries*, some to the *Bone*. The edges of a *Fistula* are white, hard, having little or no pain, sometimes moist, sometimes dry; sometimes you may press (with your fingers) the matter through the Cavity and Orifice. In a *straight Fistula* you may search it with a *Probe*; but in an *Oblique Fistula* you may use a *Wax-Candle*. Before the *Fistula* penetrates to the bone, what the *Probe* touches is soft, and the matter is white, equal, and in great quantity. If it penetrates the *Arteries*, what comes out is thin, shining, and as it were leaping. If it touches a *Vein*, the *Pus* is like *Dregs*, if the *Vein* is eroded, it is redder and thicker. If it touches a *Nerve*, there is pain in Probing it to the bottom, and the *Pus* is as it were fat.

fat and oily, but less in quantity, and the action of the Part is made uneasy: If it extends to a bone, what the Probe touches is hard, not yeelding and painful, while the Perioſtion is not corroded; but if it be corroded, and the bones be foul, you will find it rough and unequal to the touch, with a thin, stinking black matter.

XXII. *An Ulcer Carious*, is that which has foul bones under it. If the bone lyes open to the sight, it appears at first of the colour of Fat, then Yellow, afterwards black and unequal: but where it cannot be seen, you must judge by these Signs: 1. If the Ulcer being skin'd, should break out again. 2. If the matter flowing should be much, thin and stinking. 3. If a Fistula preceded. 4. If the Ulcer had been of a long continuance. 5. If the Flesh about it becomes loose, spungy, pale or livid. 6. If with the Probe, you find no resistance but an inequality. The Cause is from a long flux of humours, or from their Acrimony and Malignity,

or from an Occult quality, or from a contusion, or from sharp Medicines injuring the Bone.

XXIII. *An Ulcer from Burning or Scalding*, is from a Solution of continuity, caused by a burning matter (as hot or melted Metals, Powder, Burning Coals, Lightning, Oyl, wax, Pitch, hot Water, Brandy, &c. either in the skin, Muscles, Veins, Nerves, Tendons, &c. Sometimes the skin is burnt, and a blister is raised, but no Escar: sometimes the flesh is burnt, whereby an Escar follows, which falling off leaves a deep Ulcer.

XXIV. *Ulcers of the Nose* are called, *Oxena*, from their ill scent, being caused of sharp, choleric, salt, or malign humours, which sometimes corrupts the bone it self, but chiefly the Cartilage, whence comes a flat Nose.

XXV. *Ulcers of the Bladder*, or its Neck, have their beginning either from a Wound, the Stone, some sharp Humour, or a diuretick Medicine.

CHAP. LI.

Of Fractures and Dislocations.

KA'rayua, *Fractura*, a Fracture, is the Solution of Unity in a Bone.

II. There are seven sorts of Fractures in a Bone, to wit, first, *Agma*: secondly, *Chidasedum*:

thirdly, *Cauledum*: fourthly, *Raphanidum*: fifthly, *Apagma*: sixthly, *Alphitidon*, seventhly, *Apotras*.

III. *Ayua*, *Agma*, *fractura transversalis*, is when the Bone is

broken in the midst over thwart.

IV. *Διάχισμα*, *Chidasedum*, *fractura linealis*, is when it is broken long ways, but not separated.

V. *Καυλῆσις*, *Cauleum*, *Astiles*, is when it is broken like the Stalks of Colworts, with strings.

VI. *Ῥαφανῆσις*, *Rhaphanidum*, *Fractura Rhapanalis*, is when the Bone is smoothly broken.

VII. *Ἀπᾶγμα*, *Apagma*, *Quassatio*, is when the Bone is bruised or crushed.

VIII. *Ἀλφίτις*, *Alphitidon*, *Rimularis*, is when the Bone is broken small in or neer the Joints.

IX. *Ἀπόρριξις*, *Aporraxis*, *Refractio*, is when the Bone is broken into splinters.

X. *Fractures* are generally composed with Wounds, Inflammation, Gangreens, Ulcers, Pain, and the like.

XI. They are caused by external violence and force.

XII. They are known by sight or feeling of the part with the hand, from the inequality, noise, and pain.

XIII. Bones are joyned, either first by *Arthron*, Articulation, secondly, or by *Symphysin*, natural Union.

XIV. Articulation is, first, by *Diarthrosis*, Conjunction, with manifest Motion, as the Legs, Arms, &c. secondly, by *Synarthrosis*, with more obscure motion, as the Teeth, Sutures of the Head, &c.

XV. *Ἐκδοσῆσις*, *Luxation*, *Dislocation*, is a slipping out of the Bone out of its natural place.

XVI. And it is either complete, when it is wholly out of its place; or incomplete, when it is but a little out: or distorted as in a spraining.

XVII. The *Dislocation* is known by the extraordinary Tumour of the place; emptiness of the place where the Bone was; and privation of Motion accompanied with Pain.

XVIII. The *Luxation* of the Jaw-Bone, is caused towards the forepart of the Face, the foremost and sharp process, like a beak, being split beneath the jugular; 'tis known by the nether Jaw sticking out foremost, and the process sticking out by the said Jaw; as also because the mouth continues always open.

XIX. The *Clavicula* is *Luxated* either towards the breast bone; or contrariwise, towards the top of the shoulder blade; yet seldom, by reason of its firm connexion with both the bones. 'Tis known because the shoulder swells, and in the place where the *Clavicula* is split, there is an apparent Cavity.

XX. The *Luxation* of the *Vertebra*, is only either *Outwards* or *Inwards*.

XXI. The *Humerus* or shoulder is *Luxated*, when the head thereof (which is round, inserted, into a shallow Cavity, and fenced with a very loose Ligament) slips out of its proper place. And this is either under the Arm-Pit; and then something round and hard is felt under the Arm: or it is made forwards; then is there in the hinder part, a manifest Cavity, and

the forepart an over-great rotuberancy, the head of the humerus being distorted to the rearst.

XXII. The *Cubitus* is *luxated* either towards the forepart, then the Arm being stretched out cannot be bent, there is a Tumour in the forepart, and a Cavity in the hinder; Or, towards the outside; then the Tumour is in the hinder part, and the Cavity on the forepart, as also towards the outside or inside.

XXIII. The *Radius* is *luxated* towards the external part, and then a swelling appears in the outward part, the *Cubitus* and *Radius* stand gaping one from another.

XXIV. The *Wrist* is *luxated*, either towards the hinder part, when the fingers cannot be stretched out, because the tendons and Nerves are compressed by the Bones: or to the forepart, when there's a Tumour in the forepart of the Fingers.

XXV. The *Fingers* are *luxated*, towards the forepart, the hinder part, and sideways: the signs are evident.

XXVI. The *Thigh* is difficult to be *dislocated*, both because of the strong Muscles, and the abundance of their flesh; as also because of the deepness of the cavity of the receiving bone, and also because of two straight and short Ligaments. It is *Dislocated*, 1. *Either towards the inside*; Then the Thigh being stretched out cannot be drawn in, because the *Musculi inflexores* are compressed by the head of the Thigh bone. 2. Or towards

the *binderside*; then the Thigh cannot be held forth, because the *Musculi intendentes* are affected: that Leg becomes shorter than the other, because the Cavity is in the lower, the head in the upper place. 3. Or *inwardly*, then the Knee, Leg and Foot bear outwards; the Thighs cannot be bowed so the Groins; and just against that place which is between the Testicles and Fundament, an evident Tumour appears in the outward part of the *Sinus*. 4. Or *Outwardly*, then between the Cod and Fundament there is a Cavity, but by the Buttocks a Tumor, the Knee, Foot and Leg bend inwards, and the Heel touches not the ground, but the Sole of the Foot.

XXVII. The *Knee* is not very easily *Luxated*, because it has two ligaments, also an Head, and a double Cavity. It is *dislocated* either. 1. *Imperfectly* where an impulse is required, only to the contrary part. 2. Or *Perfectly*, when extension is necessary. 3. Or *Inwardly*. 4. Or *Outwardly*, wherein the Tumor is unwonted, and in the contrary place; the *Sinus* appears in a contrary situation, the figure is altered, and the motions weakened.

XXVIII. The *Talus* or *Ankle* is *Luxated*, 1. *Towards the inside*, then the lower part of the foot is turned externally to the outside. 2. *Towards the outside*, and then the foot is contrarily turned. 3. *Towards the forepart*, then a broad and strong Tendon in the Heel becomes hard, and the foot less. 4. *Towards the hin-*

der part, then the joynt slips to the Heel, and the Heel is hidden, the sole of the Foot is greater, and the Foot longer.

XXIX. The Bones of the Pe-

dium and Tarsus, never suffer luxation. Those of the Toes seldom, because upheld by most strong ligaments and many Tendons.

CHAP. LII.

Of Diseases of the Upper Ventricle or Head.

I. **Cephalalgia**, the Head-ach, is evident from the Pain, and is caused externally either from Blows, Sun, Air, violent Exercise, &c. Or internally from the Intemperature of the Brain (by Chap. 38) the Pain is also either within the Scull or without: for if the Pain be extended to the Roots and bottoms of the Eyes, the pain is within the Scull: but if not it is without the Scull.

For this **GALEN**, renders this Reason, because the Coats of the Eyes come from the Meninges of the brain, by which, pain and grief is conveyed to the Eyes, for the Meninges are very sensible; and cause great pain. If the pain is by propriety, it is constant and permanent; nor does it follow the Diseases of other parts: If it be by Sympathy or Consent, it depends upon the illness of another part; so that as that illness increases or diminishes, so the Head-ach, increases or diminishes: now this Pain by Sympathy, is either, by consent, from the whole Body as in Head-achs; or

from some particular part, as the Stomach, Liver, Spleen, Mother,

II. **Cephalæa**, is an exceeding old, long, inveterate continuing Pain, hard to cease, which on light occasions hath extreme sharp Fits, in some it continues always more or less, in others it goes and comes by Fits: it is caused either through much Blood, or sharp Humours, contained within or without the Skull, inflaming the Head: if the Pain comes with heaviness, it comes of Plenitude; if with pricking and shooting, of thin cholerick Humors, if the Head seems distended without heaviness, and beating, Wind is the cause; but if with beating, there is Inflammation in the Films of the Head: if heaviness with distention, there is plenitude of Humours within the Films: if the pain be outward, it is the Films that cover the Scull: but if inward, and at the Roots of the Eyes, the Films that cover the Brain are grieved.

The external pain is in the pericranium

anium (or Membrane without the Skull) and comes for the most part from External cold, because a cold part will easily suffer from the same quality: the Internal pain is always in the Meninges or internal membranes.

III. *Hemicrania*, the Megrim is Pain in only one half of the head, either right or left side: the chief Signs and Causes are shown by the first and second section of this Chapter; but I add, that here, if the Film that covereth the Skull be affected, the Pain is so vehement that the sick cannot suffer the skin thereof to be touched with ones hand.

This is by consent of the Heart, Hypochondria, Stomach, Womb, &c.

IV. *Vertigo*, or Swimming of the Head, is caused from Windy Exhalations arising and filling the Ventricle of the Brain, and is shown by Giddiness or turning of the Head, all things seem as if they turn round, and sometimes the Sick even falls down: if it comes of evil affection of the Brain, the Sight is dim, he is thick hearing, the Head aches, and is heavy, with a decay both of Taste and Smell: if the Disease comes of the Stomach, they feel gnawing there, as if it were heart-burning, and disposition to vomit.

The Subject of this Disease, is the Brain, affecting the forepart of the head, and disturbing the animal Spirits, causing a kind of hissing noise in the Ears: The cause is whatsoever generates Vapours, as Wine and other fermented Liquors; or such as is wont to disturb and agitate the humours.

The differences are taken from the Causes.

1. One is from causes evident, as stirring and exasperating the Spirits, such are turning round the body for a good while together: long and steadfast looking upon things that turn circularly: or looking down from an extraordinary height: for by things dreadful and terrible, the Spirits are diffused and driven back. 2. Another is from the narrowness or straightness of the passages of the Brain: through which the Animal Spirits pass, which being thus impeded, retreat back again; it is caused by obstruction of gross and thick vapours, or a compression of the Brain, by a blow or fracture; or knitting together of the Arteries. 3. Another is from a Windy Vapour bred and generated in the Brain; which by inordinate motion troubles the Animal Spirits, causing them to move to and fro, by which things seem to go round, this is accompanied with pain and noise in the Ears. 4. Another is from corruption of Choler or Flegm in the Stomach, and is then elevated by a windy Spirit.

V. *Phrenitis*, a Phrensey is an Inflammation of the Brain or the Films thereof, being a kind of continual Madness or Fury joyned with a sharp and continual Fever, thereby hurting the internal Senses, to wit, Imagination, Judgement, Memory, which may be severally hurt; they sleep little and troublesomely, they rise up, leap, and, cry furiously, often speaking without sense, pulling as though it were straws or the like, from the Bed cloaths: their Pulses be small and weak, breath-

ing lightly : if it comes of Blood, they laugh in their Distractions : but if of Choler, they cannot be ruled, but rage angrily, forgetting all they do.

It is caused from an Inflammation of the membranes of the Brain, accompanied with short and frequent drawings of the breath, perpetual doting, watchings, and a continual Fever.

VI. *Mania*, Madness comes either from Plenitude or heat of the Brain : it is so evident it needeth no Signs, yet what we speak, even now, at the fifth Section of this Chapter, may be understood here, with this difference only, a Frenzy goes along with a Fever, Madness without.

Madness is a continual motion of the Mind, with an unnatural or unwonted boldness and fierceness, arising from a fiery heat of Spirits, yet without a Fever. The parts affected are the Brain and Heart, which is as it were collected and straightened by over vehement Passions and Affections ; yet the Memory is commonly preserved and kept intire. Madness is distinguished from Melancholy by its fierceness ; it wants a Fever, and so is distinguished from a Phrenzy ; they watch much, and have many other signs of a delirium or dotage. It is caused from an exceeding great heat and boiling of the Spirits ; which is either, I. External, as heat of the Dog days, long Watchings, hot Drinks, strong Wines, eating of Night-shade, Opium, Cats and Weasles Brains, Philters, Love Potions, eating Dogs and Wolves, Curing of Fistula's, Old Ulcers, &c. Or

2. Internal, arising from adust blood, caused by a hot Distemper of the Liver, stoppage of the Courses, Hemorrhoids, Or, from black Choler, caused by an extream hot Spleen, pouring forth abundance of black Cholor into all the Veins. Or, 3ly. by Consent, especially of the Womb, from whence that kind of Fury, which we call Uterine has its original and Denomination.

VII. *Lethargus*, the Lethargy is a continual sluggish, and sleepy Disease, joyned with a gentle Fever, caused of too much Flegm cooling the Brain in its windings and hinder Cells: they sleep profoundly ; the Pulse is great and striketh seldom, breathing weakly, they are continually sluggish and sleepy, scarcely answering, if often spoken to, only opening their Eyes, and shutting them again, they are forgetful, and sometimes rave.

As the part affected is the hinder part of the Brain, so in this Distemper the Memory is that which is chiefly hurt : The sick insatiably desires sleep, as being never satisfied therewith, by which the Animal Spirits are as it were bound and lock't up by extraordinary obstructions : the purifying humour being extreamly sharp and fretting, there is raised a gentle Fever, which is in a manner perpetual, but more apparently returning about the beginning of the night : Forgetfulness is caused from the hurt of the hinder part of the Brain : slowness of breathing, is caused from the affection of the Nerves of the Thorax or Breast : They Cough, by reason of a Defluxion of Flegm into the Larnix : their Urine is thick and

and troubled, by reason that crude humours are agitated: their Pulses are great by reason of the Fever: if they grow soft and slow, the natural strength and powers of the Body waste and decay. It differs from a Catalepsia by the winking close of the Eyes: from Carus, by the Fever that is present herewith: from the Apoplexy, because it doth not suddenly and all at once invade the party, nor does it deprive of all kind of motion: from Hysterick Fits, because in a Lethargy, they are able to speak and make answer, and it is conjoynd with a Fever: from a Coma, from the insatiable desire of sleep, out of which they are no sooner roused, but they immediately fall into it again: It is caused from the retention of Flegmatick Vapours or matter diffused and obstructed about the Brain and the Meninges, or from Narcotick crudities. It is twofold, 1. That which is such by its own essence; touching which, all before said is to be taken and understood. 2. By consent, from a certain matter communicated to the Brain, by reason of the suppression of the Courses, Hemorrhoids or means of some other Disease.

VIII. Carus, deep or dead sleep is that in which the Sick seems to be altogether in a deep sleep, having his Eyes always shut, and being stirred or pricked, although they feel, yet will say nothing, nor answer any question; it is caused of cold and moist flegm, filling the Brain, and is known from a Lethargy, because it is without a Fever.

Carus, is a profound sleep, with want of Sense and Motion (breathing

excepted) and likewise hurt of the Imagination, arising from the impeded motion of the Animal Spirits. The differences are five fold. 1. Want of the generation of Animal Spirits, which is caused from the hurt of the Arteries carotides, which convey the Animal Spirits to the Brain; or from the hurt of the Muscles of the Temples (which have a singular agreement and consent with the Brain, by the concurrence of some eminent Nerves) by compression or bruising. 2. From Dissipation of the Animal Spirits, which is either from excessive evacuation, or exquisite pain, or from wearying or tiring of the Brain. 3. From Stupifaction of the Animal Spirits, which is either. 1. External from fumes of Coals, use of Narcoticks, Opium, Henbane; Poison inwardly taken, or outwardly applied. Or 2. Internal, from vapours arising in Feavers; or Vapours elevated by Worms. 4. From Obstruction of the Animal Spirits, whereby they cannot penetrate into the Members, which is either from an outward compression of the Skull and Brain, or from an inward obstruction of the passages, by cold and thickned Flegm. 5. From a great disturbance on the Animal Spirits, as by a Blow, Fall, or other Accident, by which the Head may be hurt.

IX. *Apoplexia*, is a Disease of the Brain, suddenly depriving the whole Body of Sense and Motion; 'tis caused from cold gross Flegm, filling the Brain and Ventricles thereof, as also the Arteries of the Rete Mirabile, thereby stopping the Spirits passage, from the Heart to the said Ven-

tricles: 'tis known from sharp pains in the Head, gnawing of the Teeth, sleep very deep, so that the sick, neither opens his Eyes, answers nor feels when he is hurt, little Urine and like rust or canker, its Sediment like Meal; they ly snoring, and breath so as it can hardly be perceived.

It is distinguished from Carus and Lethargy, because it is without a Fever: from Syncope and Suffocation of the Womb, because it is with a looseness of the Members or parts, and a full Pulse, the Face retaining its colour. It is caused from the straightness or narrowness of the turnings and windings of the Pores of the Brain (especially of the Basis thereof, and of the Rete mirabile therein) causing as it were a shutting in of the Spirits. The Apoplexy is either Legitimate or Spurious. The differences of the Legitimate are manifold. 1. From Obstructions of the Basis of the Brain and Rete mirabile, either by a flegmatick thick matter, dissolved by Heat, or driven forth by Cold, into the passages of the Brain; or else by cross and thick Vapours. 2. From Compression of the Brain; which is caused either from violent causes or concussion, blows, wounds, &c. Or from a continual leaping up of cold and moist humours, by which the Substance of the Brain is made more soft and loose. Or from a Phlegmonodes, diathesis, that is, a great quantity of Blood, rushing all at once into the source and spring-head of the Animal Spirits; this is known by the signs and tokens of a Plethory. 3. The Spurious arises from Obstructions of the Arteries Carotides, and Jugular Veins,

or else from narcotick Vapours, which stupify and make dull the Animal Spirits. 4. Of Apoplexies, some are light and gentle, with an orderly breathing, and commonly ending in a Palsy on one side: some are strong, in which the breathing is violent, unequal and intermitting: some are stronger, where the breathing is violent, there is a snorting, and a little foam or froth, if excited by compression of the Heart, or very much froth, if from windy flegmatick humours: some are the strongest and most dangerous, in which the breathing (as to the sense) is wholly abolished.

X. Catalepsis, Catochus; a congelation, is a suddain detention or benumbing both of Mind and Body, Sense and Motion being lost, the sick remaining in the same Figure of Body in which he was taken, whether he sit, lye or stand; stiff, and with his Eyes open or shut: 'tis chiefly caused of a cold, dry, melancholick humour, afflicting the hinder part of the Brain: the sick lyeth as though he were dead, the Pulse is weak, Face swarthy, and the Eyes remain immoveable, as though they were frozen.

This Disease is a suddain surprisal of all the Senses, but from what cause it should proceed, is much disputed among the learned. It is thought most probable to be caused by a Fixing Vapour, which renders the spirits fixed and immoveable, in such a like manner, as both men and beasts, have been rendered stiff and immoveable, by lightning vapours and Exhalations, breaking out of the Earth. In this Disease the

there are several Degrees: some neither see nor hear any thing: others both hear and see, but speak not at all: some also can move their heads: and others, if forcedt hereto, can walk.

XI. Epilepsia, The Falling Sickness, is a Convulsion of all the parts of the Body, by Fits, hurting the Senses and Mind: it is caused of gross Flegm, or sharp Cholor, obstructing the Spirits passage in the Ventracles of the Brain; or from Vapours ascending from the Stomach: when the Fit cometh the Sick fall down, are plucked up together, tremble, turn about, snort, cry out, and foam at Mouth. *Occupat dixit Ægineta) hoc male genus maxime pueros.*

They make a kind of Roaring or Howling noise, Collision or clashing their Teeth together, fast shutting and holding together of the fingers, Insensible Issues of the Urine, Ordur, &c. and foaming at mouth like to the White of an Egg. It is caused of a thin and frothy humor or Vapour, which within the Brain pulls or twinges the principal Nerves, and so there by introduces a streightning of the Passages, by which there follows a drawing back and shutting up of the Animal Spirits (which cause sense) from defect of which there follows immediately all the Symptoms of this Disease, and by which the parts suffer a Convulsive Motion: The Sick may be disposed hereunto either Hereditarily from his Parents, or from the Configurations of the Planets at the time of his Birth: or some posterous accident: The Differences follow, 1. One is Recent, or but newly le-

gun, or else Inveterate of long standing. 2. Another is more mild, in which some certain parts only suffer a Convulsion; or else more grievous, wherein there is a Convulsion and Convulsion of the whole Body. 3. Another is either Periodical, coming once or twice a year; or once or twice a month at new and full Moon, or oftner, but always keeping its certain times; or else it surpriseth now and then at unawares. 4. Another is that which is such in its own Essence, from an Epileptick disposition in the Brain, known by this, that the sick suddenly falls down, without any the least foreknowledge or sense of the fit, and, coming to himself again, remembers not any thing that was done, these chiefly fall about the new or full Moon. 5. Another is by consent of some other parts, from a preceeding cause in the inferior parts, made thin and elevated into the head, this when the fit is nigh approaching the sick can perceive aforehand, and remember what is past when it is over. 6. Another proceeds from Distempers of the Stomach. 7. Another from Worms, which are to be discovered by their Signs. 8. Another from the Womb, which is known by some affect of the Womb present, as suppression of the Terms, retention of the Seed, the Secundine, or a dead Child &c. 9. Another from hurts of the External parts, by biting, stinging, Wounds, or Ulcers, &c. 10. Another in such as are grown up into years, to whom all that has hitherto been spoken may be applyed. 11. Another which happens to Infants, of which we shall speak more hereafter. **XII.**

XII. Convulsio, the Cramp (either of the whole Body, or of a part,) is a shrinking and contraction of the Nerves and Muscles against ones will: that of the whole Body, proceedeth either from defect of the Brain, when the Face is plucked also with the Body; or from the Marrow of the Back, when the Muscles that move the Head and Back are drawn together: that of a part is a particular Obstruction of its original. A Convulsion is caused of Fulness or Emptiness, the which is to be discerned from the Habit of the Body.

The part affected is a Muscle, and chiefly a Tendon: The Muscles are drawn back in such a manner, that the party is altogether immoveable. It is caused from a certain matter, pulling and twitching the expulsive faculty of the part, or too much stretching of the nervous parts. And this is either in the Brain, or the Spinal Marrow, or else in some particular Nerve. 1. That which proceeds from the Brain or Spinal Marrow is universal: if from the Brain, the Muscles of the Face and whole Body suffer a Convulsion: if from the Spinal Marrow, the Muscles that move the Head and Spine are retracted and drawn back: if the Body with Neck and Head be drawn to the inner parts, it is called *Emprosthotonos*: if the twelve Muscles that Extend the Head, draw the said parts backwards, it is called *Opiasthotonos*: if the Muscles and Nerves (both anterior and posterior) be all affected, the

whole body remains wholly inflexible and unmoveable, and this is called *Tetanos*. 2. That which is from a particular Nerve hurt, commonly affects but one particular part, as the Eye, Mouth, Arm, Leg, Foot, &c. 3. If it comes from Repletion, the Nerves are stretch out in breadth and diminished in length, which is either from the Afflux of a Pituitous humor into the Nerves from unwonted diet, Stoppage of Courses, Hemorrhoides, or other usual Evacuations; or from an Inflammation of the Nervous parts by means of a Plethory, fall, blow, or continued acute pain, pricking of a Nerve, &c. Or lastly, from Wind, which soon passes away and is gone. 4. If it comes from Emptiness, the Nerves are shortened by drying up the Radical humidity, and it is caused by too excessive Evacuations, purgings and Vomiting, much bleeding at Nose or otherwise taking of Hellebor, and over violent sweats, which dry up the Radical Moisture, Inflammations, watchings, overstraining, drinking hard, Excess of Venery, continued pains, Hericks, and Cauteries or Vescatories not well applied to the Nervous parts, &c. 5. If it has its Original from a gross and thick Spirit or Vapour (excited by Crudities) which fills and distends the Muscles, it is called *PHUSODES*. 6. Lastly there is an Illegitimate or Bastard Convulsion, happening by Consent of the Orifice of the Stomach and Womb, this is painful, and proceeds from some previous Disease or the Solution of Continuity.

XIII. Paralysis, the Palsie is a Disease in which the whole Body

dy, or the one half, as the right or the left Side, or else a particular Member, doth lose Sense or Motion, or both, according as all, or some of the Nerves be obstructed: if the Brain be affected, and cause this Disease, it seizes on many parts, and on the Face: but if from affects of the Back-Bone, then the Lower parts are afflicted, and the Face is safe: it is caused of cold, gross, clammy Humours, which stop the Sinews, hindering the Spirits passage from the Brain.

The Disease is defined by some Authors to be a Spontaneous and Voluntary abolition of Motion in the parts (without any hurt of the Reason) arising from defect and want of the Animal Spirits, through fault of the Nerves: there is a weakness and trembling of the part, with a softness, tenderness, coldness and a weak pulse. The differences are diverse. 1. Universal; in which the whole Body (the head excepted) or at least the one half thereof is seized; and then if the Face is affected the Brain (with the Spinal Marrow) is affected: but if all the parts beneath the Face, then the beginning of the Spinal Marrow, is much amiss in its transverse Situation; but, if only the one half seized, then only one side of the said Spinal Marrow is affected.

2. Particular; when some one part, alone is diseased: If the Arms or Hands; then the Nerves which proceed from the Vertebra of the hinder part of the Neck are hurt: If the Feet; the Nerves which are in the Vertebra of the Loyns and

Os sacrum are affected: If the Eyes, then the second pair of Nerves is affected: If the Tongue, then the seventh pair is hurt; If the Voice fail, then those Nerves called Recurrent suffer. 3. Sometimes the Disease may arise from a Distemper in the Nerves themselves, by reason of cold Pitsuitous humors, which relax and dissolve their Tone. These for the most part descend from the head.

4. Sometimes it is from the straightness or narrowness of the Nerves caused by Obstructions from Pitsuitous matter: Or, by a Constipation from some Tumour or Swelling having its Original from the Substance of the Spinal Marrow, or of some Nerve.

5. A Palsy sometimes arises from Causes that dissolve or make a Solution of unity in the Nerves, as a bruise, fall or blow: Or from a Dissection: Or a relaxation of the Vertebra of the back suddenly caused.

6. Sometimes from things Narcotick, as Opium, Henbane, Quick-immeasurable drinking of Wine, Touching the Fish Torpido. 7. From a Thin, Sharp Choleric Windy, painful and Wheyish humour moved in the Intestines, not only to the beginnings of the Orifices of the Nerves, but to the Very Muscles and Tendons.

XIV. Tremor, Trembling is caused through Weakness of the Sinews, either by reason of abundance of gross, cold, and clammy Humours, or the excessive Drinking continually, or old Age.

It is a deprivation of Voluntary Motion, arising from the debility and weakness of the motive faculty

ty. It differs from a Convulsion because the part is kept in its posture continually: from a Palsie, because that in this the part is seldom or never lifted up; or but slowly: from a Palpitation, in regard that this is not the whole member, but the skin and flesh is chiefly moved: and from Rigor or Stiffness, in regard that it is without pain. The Cause is by default in the Animal Spirits, or the Nerves. 1. One from External Causes, as malignant humours, Opium, Henbane, Quick-silver, Poyson, retention of the After-birth or Loches. 2. Another from the Paucity of Spirits, which are not sufficiently generated by reason of a cold Distemper of the Brain; or being generated, are dissipated, wasted, and consumed by excessive heat, great evacuations, or some inveterate Disease. 3. From Faults of the Nerves themselves, which may proceed from either, a cold and moist distemper of the Brain: Or, from a Plethora, when some wanted Evacuation is stopped: Or, from a Partil Obstruction of those same Nerves, by thick and gross humours, or by Gluttony, and other like Causes.

XV. Incubus, the Night Mare, is a Nocturnal Suffocation and heavy Oppression of the whole Body, as if it were with a great Weight, in which (although the Sick seem to strive much) he cannot stir any part of his Body, nay scarcely breath, much less speak: it is caused of gross Phlegm, or Melancholy, neer or about the Præcordia, or of gross Vapours filling the Ventricles of the Brain from excessive Drinking, &c.

It is an Interception of Motion, chiefly that of breathing and speaking, with an Imagination of a great weight lying upon the Brest, causing as it were a suffocation, thereby hindring a free passage of the Animal Spirits to the Nerves. The part affected is the Brain, chiefly the hinder part thereof, and the passages reaching to the Spinal Marrow; together with a Compression and Depression of the Diaphragma.

The cause is a light Obstruction of the Ventricles of the Brain, and chiefly of the beginning of the Spinal Marrow, thereby intercepting the Animal Spirits: This Obstruction is caused of gross and thick Vapours, cold or Narcotick, by which it comes to pass, that the party thus affected can hardly wake. These Vapours proceed from a thick Flegmatick or Melancholick humor, sticking fast in the Hypochondria, and neer about the Præcordia, generated from Crudities, arising from Surfeiting, Gluttony, and Drunkenness: from hence Vapours being exhaled, the parts are swoln up, the Diaphragma and Lungs are compressed, and then those Vapours violently rush into the beginnings and enterances of the Nerves, and so creeping as it were, and insinuating themselves into the very seat of the Imagination, they intermingle themselves with the Spirits.

XVI. Melancholia, proceeding of the Brain, is known by Sadness, Fearfulness, Hatred and other strange imaginations, some think themselves Beasts, some one thing, some another, some would kill themselves, others

thers are afraid, some laugh, some weep, some prophesy, &c. 'tis caused of Melancholy Blood.

Melancholy is a dotage arising from disturbed Fantasms, filling the Creature full of thoughts and solitariness, being as it were engulphed therein, without pensiveness, fury or Fever: there is a deep sadness without apparent cause, and a long continued silence, or else an incongruous talk at Random, of some particular thing. It is caused by a Distemper of the Animal Spirit, hurt by a Melancholy Fantasm or Vapour made misty, opacous, thick and dark, almost fixed and made Immoveable; and from hence it is that Melancholy people are Tenacious, for that all kinds of objects are imprinted in their minds, according to the condition and quality of the depraved disposition of the Spirits, either acquired from a defect in the Brain, declining from its genuine whiteness, and generating such like Spirits: Or, from a defect of the Blood and Vital Spirits: Or from some degenerate Melancholy matter, as humor, vapour or both, mingled with the Blood and Spirits. The Species are many. 1. That of the Brain, when the Brain in its quality and substance, declines from its purity and clearness, which is known from a perpetual and Vehement dotting. It arises Externally, from strong Phansie and Imagination, from fear despair and other like sad affections of the mind. It arises Internally from a Melancholy humour gathered together in the head, either by some acquired cold distemper of the Brain; Or, by some cold and dry matter left behind in the

Brain, after some hot distemper, the thiner part of the matter being now resolved and gon; Or from a Melancholy habit and constitution. 2. That of the Whole Body. The blood having acquired a Melancholy habit distributing the same to all the parts, and then to the Brain: this is known, because the Dotage, or delirium is indeed continual, but so that it is with some exasperations and remissions, with general Signes of a Melancholy habit: It is caused Externally, from Fears, Watchings, Cares, which dry up the Radical Moisture: Internally, from the Parents Blood; or else from a cold and dry, or hot and dry disposition of the Liver and Spleen, and then it is either with blood, whence comes a doting with Laughter; Or, with Flegm, whence comes a dull sloothfulness and Oblivion; Or, with Choller, whence Anger discontent and peviseness. 3. That of the Heart, when the Vital Spirits that are bred, by reason of a cold and dry distemper, are made impure. 4. That which is Hypochondriacal, where a Melancholy juyce, either Cold and Serous, or Aduft and burnt in the Branches of the Vena Porta, is gathered together in the Hypochondria, from whence time after time, black Melancholy Vapours are continually sent forth to corrupt the Animal Spirits in the Brain. It is known by this, that it seizes the party by Intervals, and certain seasons, but in its approach surprises without any notice, except by Windy Belchings, and a pain distending the Stomach, with great Anxiety of Mind, difficulty of Breathing, palitation of the Heart,

immovableness of the Tongue, mists or Darknes before the Eyes, Noise in the Ears, and a stupidity or benumbedness in both Arms. The Melancholy Vapours or humors are transmitted from the Hypochondria into the Brain, either by the Orifice of the Stomach, Or else, by the Branches of the Vena Cava, where they cloud and darken the Spirits. 5. That of the Womb, which is discovered by a pain in the left side, and a manifest pulse and beating in the back, near the Diaphragma: it is caused from stoppage of the Courses, or putrifying of the Seed. 6. That which is **EROTICK**, or proceeding from Love: this is contracted either from Philters and Love potions; Or else from a venereal, lustfull Appetite, caused from an over abundance of Seed.

XVII. Amaurosis, is a Total Blindness of the Eye, when to look upon, it ailes nothing at all, unless the *Pupilla* appears blacker and larger; 'tis caused by Obstruction or Adstriction of the Optick Nerves, through Humidity; thereby hindering the Animal Spirits.

XVIII. Ophthalmia, Inflammation of the *Adnata* Tunicle of the Eyes; is that which is called by some Blood-shot: 'tis evident by the Sight: 'tis caused from De-fluxions through great Grief, Heat, Blows, or sharp Humours. Or, from a sharp Blood distending the small Veins of the Eyes, 'tis known by pain, redness, and flowing forth of the Tears: Sometimes the Blood is mixt with other Humours, by which the pain is increased.

The differences of an Ophthalmia are Eight fold. 1. A true and Genuine, which proceeds either from heat or cold. 2. A perturbation of the Eyes, called *Maraxis*, where the Eyes only appear hot, and have a certain Redness, without many Tears: this is caused either from the heat of the Sun or Fire; Or, from a pain of the Head; Or, from Wind, Smoak and adust; Or, from a blow, or fall; Or, from the stinging of a Bee, Wasp, or Hornet. 3. That where the Eye lids are as it were inverted, and turned the inside outward, called *Chemosis*. 4. Periodical, which returns at certain Intervalls of time. 5. Moist with many Tears. 6. That which is Dry, with a hardness of the Eye-lid, a small Flux of Tears, with an Itching attending, which is called *Pterophthalmia*. 7. That which is dry, without any swelling or Tears, and but only redness, and Itching, which is called *Xerophthalmia*. 8. That which has only a redness and hardness of the Eye lid, without any Itching or Tears, which is called *Sclerophthalmia*.

XIX. Albugo, Leucoma, is a white Spot contracted by the *Cornea*, and comprehending but a little space of the *Pupilla* properly *macula* (which some call a Pearl) it is superficial and white.

This white Spot renders the *Tunica Cornea* so thick, that the *Visive Spirits* have no kind of passage unto the *Visible Species*: it commonly arises from a Scar, after a wound, or an Ulcer; and sometimes after the small Pox.

XX. Car-

XX. Cataracta, Hypochyma, a Suffusion, is a Distemper of the watery Humours of the Eyes in Equality, becoming thicker than ought, and mixing with another Humour: who have a Cataract growing, see in the Air little Bodies, as Gnats, Flyes, Hairs, &c. If the Cataract be very thick, they are blind: Moreover a true Suffusion most affects but one Eye at a time, appearing with dark matter in the Pupilla, and one constant Dimness, being confirmed a short time, for the most part in six Months; which being perfected, the sight totally perished: the Pupilla being white or some other colour mixed with white, shews it proceeds of Spleen; yellow, of Cholera; blackish of Melancholy; when it is perfectly confirmed also, it is like a thick Skin over the Eye, white or red Veins about the Iris or Circle of the Eye, or white Spots about the Pupilla. A Suffusion is an Obstruction of the Pupilla hindring the sight, caused by an humour consisting in the Eye, and residing in that part thereof, this humour is either simple or mixed; in some it is transmitted thither by the Veins of the Tunics, the Tunica Uvea, or the Nerves: In others (chiefly such as have great Eyes and sticking out, i. e. Goggle Eyes) it is collected, by reason the wide-ness of the place and laxity of the passages give it an easy entrance. The differences are taken 1. from the Situation: where the disease lodges either in the Center of the Pupilla: Or, between the Uvea and Tunica Cornea, where-

in the Pupilla is distended and extremely darkened: Or between the Uvea, and Crystalline humour, wherein the opposite to the former does manifestly appear: Or, it is seated yet deeper, wherein the Pupilla is very narrow, and much straightened; the less deep it is, the larger and wider is the Pupilla. 2. From the Degree. For One is in the beginning, wherein there seems to fly before the Eyes Gnats, or other little dark things: Another is augmented, wherein the colour of the Pupilla looks like a Sea-green, or like the Air, when it is full of little clouds. Lastly, when it is perfect: wherein the Diseased discerns nothing at all, but the Pupilla appears of a white Colour: 3. In respect of the Cause. Either from thin matter, and then there is present a Plethory. Or, from thick, clammy, and tenacious humours. Or, from a clear and pure matter, resembling Silver or Pearls: Or, from a black matter: Or, from a Green. 4. In respect of Essence, which is Legitimate, and that which is truly and properly so called; and this seizeth only but upon one Eye: or if upon both, yet it is not together, but one after another, and their Symptoms are constant and continual: Or illegitimate and spurious, arising from a Vapour ascending from the inferiour parts.

XXI. Surditas, Deafness is caused of cholerick Humours, either after Feavers, or in a cholerick habit of Body: or else of gross Flegm, from a flegmatick Habit.

Deafness is an abolition of the Hearing, arising from the fault of those

those things, which concur to the constituting the hearing. 1. From default of the Brain; in that it generates no Animal Spirits; Or transmits them not by reason of some Disease. 2. From the Auditory Nerve, which has no passage to convey the said Spirits; Or, is otherwise obstructed. 3. From the Animal Spirit it self, which is not generated by reason of some Distemper of the Brain; Or, is abolished by reason of the narrowness of the passages; Or is but very little, and that thick and impure. 4. From the inbred Air; which either fails by reason of a Wound or an Ulcer, and is dissipated and scattered, by noises, Sounds and bruises of the Head, or a vehement affect of the Brain, not restored: Or, else impure, from matter sent from the Brain or other parts. 5. From the Auditory Passage, which is either formed amiss; Or stopped either wholly or in part; Or else from things externally sent thereinto; Or otherwise from internal humours, Apostemes, matter, Ulcers; Or from its being condensed and thickned by Inflammation or small Tumor; Or lastly Compressed, by reason of some Fracture of the bones. 6. From the Tympanum or Drum, which may be broken, loosened, made thicker or dryer, extended, or otherwise infested by an Inflammation neer or about it. 7. From the three little Bones, not rightly formed, or else moved out of their places.

XXII. Odontalgia, the Tooth ach, is caused either simply through Heat or Cold; or complicatedly through Defluxion of Rheum, hot or cold; or else

through Rottenness, or Hurt of the Sinew at the Root.

It is a terrible pain, of which the teeth, and likewise the soft and tender Nerves of the brain, coming from the fifth and sixth Conjugations are partakers; as also the little Nerve planted at the very roots of the teeth, adjoynd to the little Membranes, that encompass the internal cavity. It is to be distinguished from the pain of the Gums, which are sometimes inflamed, swell and putrify; which pain will not be removed although the Tooth be drawn out. The Differences are learned, 1. From the Rise and Original of the humour afflicting, which sometimes flow from the Crown of the head; and sometimes arise from the inferior parts. 2. From the place, when the pain abides in the Tooth, and then it is not so deep: in the case, the Teeth for the most part contain in them a Worm, by motion of which the pain is exasperated: when the pain is in the little nerve at the roots of the Teeth; then the pain is the more vehement, extends it self in breadth all along the Gums, and reaches even to the Ear: when the pain is in the very Jaw-bone it self, and then it flows into the Upper Jaw-bone, by the greater Angle of the eye; and into the lower, by the Temple Veins. 3. From the Qualities. Some are hot, salt and sharp, exciting a most violent and intollerable pain: Others are Cold and Flegmatick, wherein the pain is more gentle than the former, but of much longer continuance, this most commonly producing a swelling of the Cheeks.

XXIII. He-

XXIII. Hemorrhagia, bleeding at Nose, is caused either through Falls, Stripes, Vehement Exercise or Heat: or through much thin Blood, accompanied with Pain and Inflammation in the Head.

It is an inordinate excretion besides and above nature of Blood, by the Veins of the Nose being rursified, opened or divided. Thus we intend of a Symptomatical (not Critical) Hemorrhagia: for the latter terminates a Disease: The differences are taken, 1. From the Causes. One from Anastomosis, or an opening of the Orifices of the Veins, which is either caused from abundance of Blood (and then the Face is red, the Veins swell and are distended, and great feeding went before.) Or else from the Acrimony and thinness of the Blood (and then there are signs of a Cacochymy :) Or, from an Irritation of the Faculty; Or else by weakness of the said Faculty, and then the Blood issuing forth is not much, but it is by intervalls, and some weakening Disease of the Liver went before. Another is from a Diaresis, or a division of the Veins, by a sharp corrosive humour, or other like means, and then the Blood issueth forth in much greater abundance, or there went before some violent Cause. Another is from a Diapedesis, or a passing through by leaping, and then the Blood that comes forth is but little, &c. 2. From the Blood it self; One is of the Arterial Blood, which is hot, somewhat red, thin, leaping forth with violence and froathing. Another is from the Venal Blood, which is thicker and blacker. 3. From the

places whence it proceeds. One is out of the Veins of the Brain: and then there went before a pain of the Head, nor is the Flux easily stopped. Another is from the Veins of the Nostrills, and then the Blood leaps and starts out without preception, and is easily stanch'd.

XXIV. Catarrhus, Distillation of Rheum from the Head, is caused from Coldness of the Brain, condensing the Vapours, ascending à Pituita crassa, vel Pituita salsa.

It comes by reason the concoctive Faculty of the Brain is hurt; Or from an over-bundant repletion, irritating and stirring up the expulsive Faculty. It is accompanied with a sensible feeling of an humour distilling, a Cough, and sometimes sneezing. The Flgmatick matter of which it proceeds, is either Generated in the Brain from the hurt of the Concoction, or else by fault of the Brain it self; or by something amiss in the Aliment: or it is moved by the expulsive Faculty irritated and excited: Or, from causes making heat, which open the passages and make the Humours thin; Or, from Causes making cold, which either expells those humours, or does melt and dissolve them. Or it flows downwards from the parts which lye under, or are within the Scull. Or, from the parts of the Head without the Skull: the parts to which the Flux is directed are either Internal, as the Lungs, Throat, Stomach: or External, as between the flesh and skin, as also through the Veins, Arteries, Muscles, and Nerves, and parts contiguous with them. The Differences are threefold 1. From the humour, which

is either cold and moist, plentiful and rushing down with violence, or but little, and falling down leisurly; Or thin and watrish: Or else it is hot and moist, causing fainting and whimsies in the Brain. 2. From the Manner, wherein it either rushes with Force and Violence, Or it is suffocative and choaking, flowing strongly to the Lungs and Heart.

3. From the communication of the Matter to the Brain, through fault of the Brain, either from a cold Stomach and a hot Liver; Or else from consent of some other Bowels.

XXV. *Angina vera*, a true Quinzeys, comes of much inflamed Blood, flowing to the Throat and Amygdala's, causing a Tumor or Swelling, difficulty of Breathing and Swallowing, Redness of the Face and Neck, and with a continual Fever.

The Throat is in a manner stop't up, so that breath and swallowing are much hindered, wherein both the Gullet is obstructed, and the two Muscles, called Oesophagici & Circulatores (because they embrace and encompass the Oesophagus with their transverse Fibres, resembling a Semi-Circle) do suffer. The Differences are threefold: The first is called Cynanthe, when the Muscles of the Larnix are Inflamed, the Symptoms are very dangerous, although neither internally nor externally any Tumor appears; the sick puts forth his Tongue like a tired Dog, to fetch his breath. 2. Synanche, when the tumor shows it self within the Jaws; the Symptoms are there also great, but much less than in the former. 3. Parasyanche, when the Tumor appears

more externally, seizing upon the Neck Bone alone, and the Muscles thereof, that belong to the Tongue and the Hyoid Bone: this of all is least dangerous, because of its distance from the Throat, constitution of the Parts, the Muscles of the Larnix not inflamed, nor the passage of Breathing stop't. 'Tis caused for the most part of Blood mixt with Serum or Choler: The Parasyanche or Bastard Quinzeys, proceeds from a Pituitous matter, sometimes from Atra-bilis: But late Physicians make another difference, viz. Parachynanche, when the outward Muscles of the Larnix are inflamed with a little swelling.

XXVI. *Distemper of the Brain.*

It is twofold, either without matter, or with matter: That without matter is four-fold; 1. An Intemperature arising from Heat. 2. From Cold. 3. From Dryness. 4. From Moisture, all which are to be known from the Signs of those Qualities. That which is with matter is Complex, being a declination of the Brain from its due Temper, arising either from causes External, or Internal, or both. The differences are threefold; 1. Essential, wherein the Brain is afflicted either with matter generated in the Brain, which is known from the Symptoms presently appearing, and continually afflicting more or less: Or by Consent, when the matter is transmitted to the Head, from some other place. 2. From Wind or Vapours, which is known by sense and feeling of an extention or stretching out, or by an heaviness in the part affected, a kind of singing noise in the Ears, extraordinary beating of the

Pulses, and a Vertigo. 3. From Humours superabounding, as Blood, Choler, Flegm, Serum, Melancholy.

1. That from Blood proceeds from a Plethory and the over-thickness or thinness of the Blood: known by a heaviness in the Head, redness of the Eyes, and pain of the forepart of the Head, from 9 at night, till 3 in the morning, as also drinking Wine, or other hot and inflaming Liquors. 2. That from Choler, is known by a sharp, pricking pain on the right side of the Head, burning Heat, yellow excrements of the Ears, bitterness of the Mouth, and the depravations of the action of the Brain. 3. That from Flegm, wherein is much sleepiness, pain in the hinder part of the Head, afflicting from the third hour of the night to the ninth, paleness of the Face, humidity in the Nostrills and Eyes, and sometimes a Catarrh and Cough attending. 4. From Serum or Water, it is known from the last Signs, only the Humor is much thinner, and more troublesom. 5. From Melancholy, which is known from Dotage, Fearfulness, Sadness, Pain on the left side, terrible Dreams, and sometimes a suddain loss of all motion.

XXVII. Commotion of the Brain. It is a removal of the same from its natural place, by reason of some external and Violent causes; it is known by a sudden consternation of the sick, as becoming Dumb, Speechless, and altogether deprived of Motion, except only the opening of their Eyes: it is generally caused from some violent Blow or Fall; or some extream and over long

noise of Guns, and Thunder, by which either the Spirits are disturbed, or there is made a Fracture of the Skull. The Differences are two fold, 1. More Gentle, in which the Animal Spirits are only with Violence drawn back to the Brain, without any Rupture of the Vessels, accompanied only with a drowsiness or sleepiness. 2. More Grievous, in which all the parts of the Brain are removed from their natural situation, the passages are smitten, and the Vessels broken; which is accompanied with Aphony, or loss of Speech, blood plentifully cast forth by the Mouth and Nostrills, and great Vomiting, then the matter becoming putrid and rotten, there is a Fever, a Dotage, a Sphacelus of the Brain, &c. and the matter falling into the Nerves, other Symptoms follow.

XXVIII. Inflammation of the Brain. It is a swelling thereof, proceeding from Blood, cast forth out of the Vessels into the void spaces of that part, and there putrifying, known by an acute and continual Fever, which from third day to third day is exasperated, a perpetual doating, increasing by degrees, a red kind of colour and deformity of the Face and Eyes, salt and sharp Tears falling of their own accord, from weakness of the part, quick Pulse. It is caused by Blood falling out of the Vessels, and there putrifying; which comes either from a Plethory in the Part, or its thickness and acrimony. It is threefold; 1. That which arises simply from Blood, or blood mixt with choler. 2. From an Inflammation of the Mem-

branes of the Brain, Or substance of the Brain, *wherein a pain seizes the Head, and by the hinder part thereof penetrates to the very Nape of the Neck, with a loss of Senses, both External and Internal.*

3. That which either goes before or follows a Feaver.

XXIX. *Contusion of the Head.*

It is an affect from External Violence, the Blood is cast forth out of the Veins, there is a soft Tumor or Swelling, black and blewish, but without much pain, the skin being for the most part whole and unhurt. *If the Muscles of the Temples are bruised, then Doting, a Palsy, Convulsion Fits, and Death follows.*

XXX. *Hydrocephalus*, a watery swelling of the Head. It arises from a collection of Serous or Watery Humors, in some part or other of the Members which constitute the Head: this Humor is sometimes Dreggy, and sometimes Bloody; it is so apparent that it needs no signs, for it may be known by sight: and it more commonly afflicts Infants than persons of elder years. *The differences arise from the Situation of the Humor.* 1. One kind is from a water sticking between the Skin and Pericranium, and then the swelling is soft, transparent by candlelight, void of pain, yields to the touch, and immediately rises up again, and when pressed shows a fluctuating of water. 2. Another kind is from water lying between the Pericranium and Cranium or skull; this is known from the pain thereof. 3. Another kind is from water gathered together, between the Cranium or skull, and the Membranes. In this the swelling is much

harder and pain greater, and the forehead swells or sticks out more than usually, or against its natural form.

XXXI. *Unnatural Watchings*, Præternatural Watchings, are the wearying of the Common sense, and the External, beyond a due or just measure, arising from the continual uninterrupted influx of the Spirits into the Organs: the Spirits flow in either from, 1. *External Causes*, as too much Light, Cares, Cogitation, &c. Or from Internal causes, as pain, hot Distemper of the Brain, &c. Either with or without a Feaver. 2. *Or from hot Vapours*, which are salt and sharp, disturbing the Spirits by their pricking and twinging the Membranes of the Brain: these are elevated either by some Aposteme of the whole head, or from some parts thereof, and that either with or without a Feaver. 3. *Or from defect of such Vapours*, as might cause rest to the Animal Spirits; in regard they are not generated, as in a long abstinence from Food; or because they are as soon as generated dissipated and scattered, as in a hot Distemper of the Brain. 4. *Or from Pain, Coughs, Fluxes, and other the like affects.*

XXXII. *Cataphora*, or *sleeping Coma*; It is a deep kind of Drowsiness, arising from the *Sensus Communis* or common sense, made dull, sluggish and stupid, so as that it permits not the Animal Spirits to be diffused to the External Senses, whereby it may be able to know or judge of those objects, which it receives from them. The sick sleep for the most part

part with the lower jaw-bone hanging down, his mouth gaping and wide open; being roused, he opens his eyes, and answers, but immediately falls asleep again; it is caused from all things which impede the influx of the Animal spirits into the Organs of the senses, thereby rendring those spirits more unapt for performance of Animal functions. *The Original hereof is either from too great humidity, or coldness of the Brain; or from Narcotick Vapours, bringing in a certain dulness upon the Animal Spirits: These Vapours are either from over-much drinking; or from a Feaver; or from Consent of some other parts, as Stomach, spleen, womb, &c.*

XXXIII. Oblivion, forgetfulness, or loss of Memory. It proceeds either from malign Vapors, or a cold and moist temperament of the Brain, thereby rendring the Animal Spirits either too Volatile, or else Torpid, dull and sluggish, by diminishing the natural heat. It is caused either from Poyson, & Narcoticks applied to the fore-part of the head, or to the hinder part of the Neck; Or, from Filters, love potions, watchings, carefulness, hot medicaments: Or from a cold and moist temperament, proceeding from either too young or old age, cold and moist meats, drinks, air, sickness, or other causes: Or lastly, from hot Diseases, Apostemes in the Brain, much yellow Choler exalted and turned into vapours, by which the motion of the Animal Spirits is impeded: But this is also sometimes caused from an ill conformity of the Head and Brain, or over great thickness of the same,

too straight or wide passages, by which the Spirits are either too much compressed or dilated, &c.

XXXIV. Delirium, or Dotage.

It is a deprivation of the Fantasy and rational Faculty, arising from an irregular Phantasm: in the beginning they are talkative (in those of few words) and contrariwise; fierceness in a mild person, ribaldry and scurrilous Language, the motion of the Eyes quick (being affected by consent of the Brain, Arteries, Veins and Nerves) Pulse irregular and swift, with a perturbation in the Hypochondria; In the height, the speech and Actions of the Sick, are what they have been altogether unaccustomed to, with much incongruity and folly. It arises from Anomalous Idea's, by a fault of the Animal Spirits, being clouded, darkened, made black, thick or opacous. *It is either primary, or symptomatical: 1. The primary is when the proper substance and essence of the Brain is affected, either with or without a Feaver; by which the Sick is possessed with Paraphora, a dotage and error of the Mind, being busied about toys and trifles; or else down right Folly, in which the principal Faculties are extremely, depraved. 2. Symptomatical, when it is the Symptom of some other Disease, and arises from consent of other parts.*

XXXV. Rabies, Raging madness. It is a delirium proceeding from a peculiar poyson, bred in any living Creature, and communicated unto man: the chief that communicate this poyson or poysonous Spirit to man, are

the *Woolf, Cat, and Dog*, but chiefly the last, the which is affixed by the foam or biting: *In the beginning* the sick is soon moved to Anger, and has a continual inclination thereto; complaining of the Air, as if it were moist, no desire to drink, but to have candles lighted up in the day time, with a Verrigo and lightness of the Head. *Being confirmed*, there is a distention of the Members, (but not continual) foaming at mouth, frowning, fierce looks, spitting and spawling upon them that are nigh, a barking like as of Dogs, an abhorring and flying from water, from whence this affect is not improperly called by some *Hydrophobia*.

XXXVI. *The waking Coma.* It is a desire and inclination to sleep, (but with an utter disablility thereto) arising from Narcotick Vapours, which induce a drowsy or sleepy disposition, yet trouble and disquiet the Mind. They wink with their Eyes, and often open them, have a doting kind of discourse and an inordinate motion of the hands and thighs. It sometimes is caused from a great weakness of the faculties of the body, either from some grievous disease, and violent pains, or from immoderate evacuation.

XXXVII. *Rigor*, or an extrem cold and stiffness. It is an unnatural vehement stiffness, accompanied with a vibration or shaking of the Muscles, of the whole body coldness, and a certain pain, by reason of a præternatural sudden and unlookt for twinging and pulling of the sensible parts, throughout the whole

man, and irritating and stirring up the expulsive Faculty: The whole body is affected, or at least the Muscles of the same. It is caused by something collected and contained in the Muscles themselves, or else is transmitted thither from some other place; being a matter much in quantity, volatile moveable, sharp, biting and corroding. *There are 4 kinds hereof.* 1. One from things external. *As cold Air, sprinkling cold Water upon the Body, External heat, dissipating fuliginous Vapours, which before were at rest, the falling of a spark of fire upon the skin, &c.* 2. Another from causes Internal, as salt Flegm, Cholera, Melancholy, sharp Vapours. 3. Another which is extrem with a continual Fever. 4. Another which is Periodical, afflicts now and then by Fits, and returns at certain times.

XXXVIII. *Glaucoma, Pin and Web.* It is a certain red substance in the Eye, like unto a small piece of Cloth, arising from the too much abounding of Blood in the exterior veins of the Eye. It appears chiefly in the superficies of the *Tunica Adnata*, as it were a fleshy Web, with an Itching, a Pain, an offending the the Eyes by light, obstruction of the sight, and sometimes abolition thereof: it is caused by blood derived unto the Eyes, either alone or mixed with some other humor, and that either by way of Fluxion or Congestion; and this either by the *External Vessels*, and then the forehead swells a little; or by the *Internal Vessels*; and then there is a pain extending

it self to the very roots of the Eyes.

XXXIX. Hyposphagma, Sugillation, is a Spot or Blemish in the Eye, either redish, or black and blew, arising from Blood cast forth of the Veins being opened, and common to the *Tunica Cornea*. It is caused by whatsoever may open the Veins, whether external or internal. *The differences are threefold:* 1. Either from Causes external, as a blow, noise, sound of Trumpets, &c. or internal, as great store of Blood, or violent heat thereof, and then the Spot is of a Citerne colour. 2. Either from its being recent, in which the blemish is of a red colour: Or Inveterate and of long standing, in which the spot is black and blew. 3. Either from the Blood being cast into the *Tunica Adnata*, or *Cornea*: Or else from its being cast forth into both those Tunics at once, and then all objects seem to the sick of a redish colour.

XL. Mydriasis, platucoria, Dilatation of the Pupilla: It is when the Pupilla is enlarged, above the ordinary course of Nature, towards the Iris, or parti-coloured circle of the Eye; The sick cannot see and discern so clearly (looking upon an object) unless they a little close their Eyes: it comes from Extention and stretching out of the *Uvea* (of which the said Pupilla is the hole or inlet) either by means of external or internal Causes: one is Native, being contracted from the very Birth; another *Adventitious* and hapning accidentally: Another from causes External, as Blows, Falls from high places, &c. Ano-

ther from causes Internal, from dryness extending the *Uvea*; or from humidity by a flux of Rheum.

XLI. Aposteme in the Ears. It is known from the Vehement Pain and Beating, Redness of Colour extending itself as far as the Temples and Cheeks; to which sometimes there is adjoined a Fever, Dotings and Convulsions: it is caused of Blood thin and Cholerick, cast out of small Veins into the Membranes of the Ear: It is divided into an Inflammation or Tumour Profound, in which (by reason of the compression of the greater Arteries) the beating is so much the greater; and the pain (because neerer the Brain) the more Vehement: Or less profound, in which all the Symptom are less than the former.

XLII. Ulcer of the Ears. It is known by Blood, Filth, Pus, or Corrupt Matter issuing forth: It is caused either from such things as generate Pus: Or else from such things, which by their Sharpness and Acrimony are of a Corroding Nature. *The differences are manifold:* 1. One is from an Aposteme broken after an Inflammation. 2. Another from Acrimonious and Corroding Humours. 3. Another from filth too long kept in the Ear. 4. Another from external Corrosives fallen into the Ear. 5. Another is Recent: Others, Inveterate, easily degenerating into Fistula's. 6. Others are Fistulous from the long continuance of the Ulcer. 7. Some come from an Aposteme of the Brain, broken; Or filth generated

in its Veins, which is this way exhausted.

XLIII. Pain of the Eares. In elder persons it needs no Signs: in Infants, if the part be but touched, it will be discovered by their moans and Crys: it is caused from a distention of the Membranes, encompassing the Cavity of the Ear, being endued with an Exquisite Sence: It proceeds sometimes from External Causes, as falls, Blows, Wounds, things fallen into it, &c. Or inwardly from an Inflammation, Tumour, Or Ulcer.

XLIV. Tinnitus, Noise in the Eares. It is a preternatural Sound in the Ears, made and perceived in the Instrument of Hearing, or else the Cavities of the Head-Bone, arising from Vapours, first shut up therein and then agitated. The cause is supposed to be *Pneuma Phsyodes*, from a preternatural agitation of the Inbred Air, which arises. 1. Either from the part, Or else by consent and agreement of other parts, as the Stomach, Liver, Spleen, Womb, &c. 2. Or from External Causes exciting Vapours, as too great cold or heat, too great fullness of meat or drink especially Wine, the Northwind blowing just after the South. 3. Or from Internal causes, by hot Vapours filling the little Artery that runs to the Ear; Or a cold, moist and flegmatick humour; Or from a Cholerick humour which happens in Fevers. 4. From filth and impurities lodged in the Ear. 5. From an Aposteme, which is known by its own Signs.

XLV. Ozena, An Ulcer of the

Nostrils: (the name *Ozena* may indifferently serve for all sorts of Ulcers of the Nostrils, though Anciently, it was only taken for an old and inveterate Ulcer of the same part.) It is caused by a Fall, Blow, Contusion, Wound, or some Acrimonious humor, caused or proceeding from some Inbred Malignity, in the French-Pox; or from Suffumigations, Unctions, &c. with Mercury, Cinnabar. It is either Recent, which is known by the frequent Issue of Blood, though in small quantity, chieflly being irritated or hard touched, and being let alone will be grown over with a dry Scurf or Crustiness, which by strong blowing of the Nostrils will fall off, Or Inveterate, known by a filthy, stinking matter, offensive to all, making the breath stinking and corroding the parts, sometimes perforating even to the Palate.

XLVI. Ptyalism or Unnatural Spitting. It proceeds from a Superfluity of Spittle, is involuntary, and without Cough or reaching. It arises either from External Causes, as Suffumigations and dangerous Anointing with Cinnabar and Quicksilver, Gluttony and Drunkenness, feeding full with moist Meats: Or from Internal Causes, viz. a serous and watery or pituitious humour, either 1. Falling down from the Brain into the Jaws, mingling it self with the Spittle. 2. Or, being made habitual to the whole Body, and transmitted to the Salivatick Vessels, which is most common in Children. 3. Or from too much moistening of an Em-

Empty Stomach. 4. Or *unnatural hummeding the Bowels, Liver, Spleen, Lungs, &c.* whence comes Worms, Scurvy, Dropsy, &c.

XLVII. Aphtha, Exulcerations of the Mouth, called by Nurses and Old Women the Thrush. It is a hot and Fiery Exulceration in the highest part or Superficies of the Mouth. *The Differences are five fold: 1. Either External, as Uñction with Mercury; sharp Diet, Corrupted in the Stomach, eating things of a Malign Quality, retention of the Courses, &c. Or, Internal from ill humours as Flegm or Choller, where the Inflammation is greatest, Or else from Vapours arising from the whole Body, or some part thereof. 2. It is either Recent or Inveterate. 3. It is either sordid and foul; or leaves behind it filthy Ulcers. 4. It is either infects only the uppermost skin, Creeping from thence by degrees into the Gums, Pallet, Sides and Roots of the Tongue. Or else it penetrates more deeply, eating quite through the Pallet and Flesh of the Tongue, chiefly in Infants, because their parts are softer and more tender. 5. It happens either to Children from their Breast-Milk being Hot, sharp, and Salt: Or, to Elder Persons, from some of the aforesaid Causes.*

XLVIII. Corrosion of the Teeth. It is a Disease of Magnitude, the Teeth being diminished or made less by a Corrosive or eating Humour or Spirit, by which they are gnawn, broken, and fall forth by Piecemeal; some-

times producing Fistula's. It is known by the greyness or blackness of the Teeth, and a foetid or stinking Breath thence arising. The Cause of the Corrosion is either from paints or washes made of Mercury; or from Sweet-Meats, chiefly Sugars, or from food taken too hot, or too cold; or hot Burning Medicines. Or else it is from some Internal Cause, as Worms bred in them; Or from sharp Humours descending from the Head and Brain. *If it degenerates into a Fistula, it is almost insensibly, the Humour by little and little corrupting the part, whereby a kind of rotten filth with a stinking savor flows into the Mouth; Sometimes it is leisurly derived or transmitted to the External parts along by the roots of the Teeth, and passage-holes of the Jaw Bone, by which it slips into the said Jaws; where this humour excites certain little Swellings, sometimes in the Cheek, and sometimes in the Chin; and often the Ulcer remains continually open.*

XLIX. Nigredo, Blackness of the Teeth. It has a two-fold cause, either External or Internal: *The External* comes from want of cleansing them, use of hot and Sweet things, and unskillful application of Quick-silver: *The Internal*, the Breath tainted from Gluttony and Surfeiting, impurity of Humors and an obstructed Spleen.

L. Excrecence of the Gums. It proceeds from a Spunginess, rarity and looseness of the Gums, through an afflux of Blood, by reason of pain, or some other cause:

cause : the Magnitude thereof is so great, that sometimes the Teeth, especially the Grinders, are quite covered over. The Excreſcent fleſh is ſometimes lax or Loofe, Sordid and Flagging, and if it be now and then touched it ſends forth a kind of Crude Blood : Sometimes it is accompanied with a Putridneſs and Rotenneſs : and Sometimes, (which I have once and but once obſerved) it degenerates into Cancer, leaving the Patient without hope of Cure : the Tumour was hard, black, and as big as ones Fiſt doubled.

LI. *Inflammation and Ulcer of the Tonſils.* It is a heat and Tu-

mour ſwelling them up, cauſed from an afflux of Humours Hot and Sharp ; It ariſes in little Children from their inſatiable feeding, and Feeble Conſtitution of the Body : In Children that Suck, from fault of the Milk : in Girls for want of their due Monthly Purgation : In thoſe of ripe Age, from Gluttony and Drunkenneſs, or the French Pox. It is known by Sight and Touch, ſticking in the Throat and Jaws like ſmall Gobbets, hindering meat, drink, and ſpittle, that they cannot eaſily paſs down, with a pain, a burning heat and thirſt. Ulcers follow the Inflammation.

CHAP. LIII.

Of Diſeaſes of the Middle Ventricle, or Breſt.

I. **T***uffis*, a Cough, is cauſed either of Cold, which cauſes a Diſtillation from the Head, or from a ſharp Humour contained in the Breſt and Lungs, which cauſes a Cough without any Spitting.

Indeed the Cauſe is whatſoever may affect the Lungs, rough Artery, and that Membrane wherewith it is encompassed, and ſituated about within, whether it be things External, humours or Vapors : The Differences are manifold. 1. from External Cauſes ; as Cold Air, things Salt, ſharp or Sour, as alſo things Oily, and fat. 2 From

Cauſes Internal ; as a Viſcous clammy humour, wherein little or nothing after Coughing is ſpit forth : Or elſe a thin humour, wherein nothing is ſpit forth, becauſe in Coughing it is diſperſed by the Breath and falls upon the Lungs : Or elſe an humour in the Lungs, or ſome other parts as the Brain, in which there is a Catarrh : Or from a Sharp Vapor Obſtructing and hurting the Lungs, or the Membrane, wherein the Cough is dry : Or laſtly, from Pus, or a putriſied matter, which happens in a Pleuriſie, Phthyſis. Peripneumony, Wound and Inflammation

on of the Diaphragma, &c. 3. From the Quality: One is dry in which nothing is coughed up: Another is moist, in which much matter is cast forth. 4. From the Time: One is Continual, or at least with very little Intermission, from some Obstruction, or rooted internal cause. Or it is Periodical, which afflicts by certain Intervalls, and returns two or three times a year, more or less.

II. *Asthma* or Difficulty of Breathing, is caused either through Distillations filling the *Trachea Arteria*, which may be felt: or through much gross flammatory Humours gotten into the Gistles or Lappets of the Lungs, causing a Swelling or Compression in the Lungs, and stoppage in the Throat, almost to Choaking.

There is a difficult thick and short respiration sometime with and sometimes without a Fever; with rattling Noise or Wheezing, by reason of matter sticking fast in the Windings of the rough Artery; and sometimes in the smooth Arteries. The Inspiration is more difficult than the Expiration; and there is adjoined coarseness, a Cough, and Windiness in the Precordia. The Cause is from an Obstruction both of the rough and smooth Arteries. The Differences. 1. From a Viscous humour falling on the Lappets of the Lungs, by which the breathing is difficult and with a Sound as it were, and a wheezing Cough. 2. Another is from a Serous or Watery humour waxing hot in the greater branches of the *Vena Cava*, rushing violently through the right Ventricle of the Heart into

the Lungs, and pressing down the Artery: hence comes slow belchings. 3. From the Violence: One is light and gentle with Noise, rattling and a strong Cough: Another is Violent (called *Orthopnea*), in which the Breathing is exceeding difficult, thick and short, with the Breast and Neck straightly erected. 4. From the Time: One is Periodical, wherein the Paroxysm returns at a certain time: another is Continual.

III. *Pleuritis*, is an inflammation and Tumor of the *Pleura* or Skin, girding the Ribs and Sides, and of the Muscles to which it sticks: caused of a abundance of Blood, flowing to to the said Skin with other Humours, discerned by the Habit: 'tis known by Difficulty of Breathing a continual Fever, hard Pulse like a Saw, Cough, vehement pricking pain, and Tumor thereabouts.

In this Disease for the most part the Lungs suffer, as also the Mediastinum, Pericardium, Mesepleural Muscles and Diaphragma. The Pathognomick Signs are, 1. A Vehement pricking pain of the Side. 2. A Cough. 3. Difficulty of breathing. 4. A Continual Fever. 5. An hard Pulse. Which Signs ought to concur and meet together at once, and not scatteringly, without which it cannot be a *Pleurisy*: Sometimes the *Pleura* is inflamed in the back about the Diaphragma, which is by the unskillful taken for the Nephritick pain, to the great hurt of the Sick. It is caused from a Plethora and a Serous humour salt and sharp, thrown forth from the *Vena Cava* by the branch

branch termed Azugos, with the Arterial blood upon the Membrane, Plura, most commonly by an Anastomosis, sometimes by a Dizerefis, and sometimes though seldom by a Diapedesis. The Differences: It is either, 1. Legitimate and exquisite, proceeding from a sharp Arterial blood affecting either the Interior Tunicle (and then the Sick doth with the more easie lye upon the pained side, in regard that the Tumour is not immediately under it, neither doth it in this case distend the Grieved part) Or the Exterior about the Bone, and then the Case is quite contrary to the former; Or otherwise both of them, and then the Sick must lye continually on his back. An Exquisite Pleurisy may also affect either the Right or Left Side, or the Superior part, extending it self to the Throat; or the Inferior part, reaching even to the Hypochondria. 2. Illegitimate, Bastard, or Spurious, which proceeds either from Wind, and then the pain is not fixed, but runs from place to place, there going before, causes generating Wind: Or, from a Distillation, which hath with it a sense and feeling of a defluxion, or something falling down at certain times: Or Externally, when the blood through the branches from the Ramus Axillaris is emptied out into the External Muscles of the Thorax; then the pain is intollerable upon the pressure of it; and lying upon the pained side is grievous, nor is any thing cast forth by spitting. This easily degenerates into an exquisite Pleurisy.

IV. Peripneumonia, is an Inflammation of the Lungs from

Blood cast forth into their Substance with a sharp Feaver, caused of Distillation, or preceeding Diseases, or Simple heat of the Parts, and a straitness of the Brest: 'tis known by difficult breathing, burning Feaver, stretching out of the Brest, it being red, the Eyes swell, Tongue dry, Breath is hot, Apperite lost, a dry Cough, they covet cold Water, but rather cold Air.

The pain in the Brest is pricking and extends it self even to the back-bone, where the Membranes that touch upon the Pleura are fastned and upheld. The Difficulty of breathing is indeed greater than in a Pleurisy; so as that the sick is in extreame danger of suffocation: The face is red, the Temple Veins swell, the Cough is troublesome; the spittle is at first a kind of thin putrified Rotten matter; then died with blood; afterwards with other Colors, and sometimes it is full of froath. It is caused of the blood cast out of the Right Angle of the Heart into the Vena Arteriosa, filling not only the Veins and Arteries of the Lungs, but also the whole body: this arises from great heats and colds, drinking cold water after violent exercise upon a full Stomach, Anger and other passions of the Mind. The Differences arise: 1. From the Subject, wherein either the whole Lungs with the heart is inflamed: Or but one side only of the Lungs either right or left, upper or lower part, according to which the Sick feels the pain. 2. From the Cause. One is from pure blood, from whence arises a Phlegmone, the spittle is bloody unless there be great

great Crudity; a great straightness of the Precordia and the whole Breast, and a great intense heaviness upon that part of the Breast where the Ribs meet, and the back: Or it may be derived from a Pleurisy, and yet not by the Vessels, because there is no conveyance in them; but by the Membrane that invests all the parts of the Thorax, whereby the matter is translated from the Outward to the Inward, and from the less Noble to the more Noble parts, and such as are nearer the Heart, by which the Disease becomes the more dangerous: Another from Choleric blood, from whence it is that a Quinsy is often changed into a Peripneumonia, known by yellow spittle raised by the Cough; the Chest straighter than in the former, the Veins less, & the Fever scorches with a more violent and intense burning heat.

V. *Empyema*, or an Aposteme resolved of the Lungs or Breast, arises generally from an Inflammation of the Lungs, or a Pleurisy, being suppurated, and the Rupture of the Aposteme, whereby the Matter falls into the Cavity of the Breast: while the Suppuration is perfecting, the Fever encreaseth; being broken, much Pus is evident, the Sick spitterh Matter; a Fever, Faintness, Heaviness in the bottom of the Breast, strong Cough and Pains being concomitant.

The part afflicted is the Capacity of the Thorax, or the void space betwixt the Thorax, and Lungs, and sometimes the Lungs, and then there is a heavy dull pain at bottom of the Thorax, chiefly near the Diaphragma, and a redness of the Cheeks three or four hours af-

ter eating. The Cause is that very purulent filth it self filling up the Thorax; the great quantity whereof and its stinking smell; with its Acrimony, causes a most sad and grievous pain. The Differences. 1. One is from a Rupture of some preceeding Aposteme, as of a Quinsy, Pleurisy, Peripneumonia, being terminated by suppuration. 2. Another from a Vein opened, broken, or gnawed asunder, from whence blood issueth, and is converted into Pus or Corrupt matter, forming to it self a bladder. 3. Another is from a Distillation of Rheum from the head into the Breast, which in about 14 days time (not being removed) is turned into matter.

VI. *Hæmoptysis*, *Sputum Sanguinis*, Spitting of Blood, 'tis caused outwardly by Falls, Leaping, Blows, great Crying, Heat or Cold: or inwardly through Plenitude, or some sharp Humour corroding the Vessels.

Whether it be by means of *Anastomosis*, *diæresis* or *diapedesis* of the Veins, concerning which see Cap. 52. Sect. 23. foregoing. The Differences are taken, either from the three aforesaid causes; or from the parts transmitting.

1. One is from the Brain, where in there is a Cough, heavy pain in the Head, taste of Blood in the Mouth, and a swelling of the Veins of the Forehead. 2. From the Jaws, which is known by reaching, and an evident Solution of Continuity. 3. From the Throat, there is pain in the Larinx, and blood is cast forth with a frequent, small and easy Cough. 4. From the Rough Artery, with a gentle Cough

Cough and pain of the part affected, there issues out a little pure red blood, and sometimes with small strings. 5. From the Thorax, the blood is little, not frothy, blackish, Clotty, and sometimes stinking, and mixt with Corrupt matter. 6. From the Lungs, wherein the Blood is always froathy, hot, compact, with a Cough, but without pain, and sometimes some of the said blood is putrified. 7. From the Inferiour parts, in which some blood is cast forth by Vomit, together with pain, and a Bloody ejection.

VII. *Atrophia, Tabes*, a Consumption, is a drying and Wasting of the whole Body, arising by the disappointment of its nourishment; this Disease is known, by the Nostrils being sharp, Eyes hollow, Shoulders and Bones sticking out, they cough, breath difficultly, sometimes are thirsty, and have their Hair fall, they spit either Blood, Froth, or Matter, and that stinking; being often caused from an Ulcer in the Lungs.

The Subject is the whole body, chiefly the soft parts as flesh and fat, the harder may be dried scarcely diminished: The Cause comes from the Disappointment of Nourishment, which is either; 1. From Obstructions, whereby the Nutriment cannot be conveyed to its respective parts. 2. From the vice or weakness of the Attractive faculty. 3. From want of Nutriment, which comes from the fault of the Concoctive faculty through decay of Native heat, or Radical Moisture. The Differences: 1. One is Universal of the whole Body, of which we have here spoken: Another

particular which come from fault of a particular part. 2. Another is from the Stomach, it not elaborating the Chyle as it should do. 3. Another from the Liver being too hot and dry, and wasteth much Choler, or obstructed. 4. Another from the Spleen obstructed or diffused Melancholy. 5. Another from the Mesentery obstructed, most familiar in the Indies. 6. Another from the Heart, which is an Hætick. 7. Another from the Lungs which are Ulcerated, as in a Phebsick. 8. Another from the Intestines being repleat with Worms. 9. Another from the back from the little Worms infesting the Skin.

VIII. *Dolor Ventriculi*, Pain of the Stomach is caused, either from Worms, Wind, or sharp Humours: if Worms, there is almost always a perpetual gnawing: if Wind, it afflicts the Head also with Pain, if sharp Humours, they either cause Vomiting, or Loosness, or Inclination thereto.

Or it is a miserable sensation of the same, arising either from things that distend it, or gnaw it, or dissolve its Continuity. The Differences are taken. 1. From the Parts: the pain is either in the Coats of the Stomach, which is simple, and to which the former Signs agree: Or in the Mouth of the Stomach, which is known by fainting, Swoonings, immoderate sweats and anxiety. 2. From the Causes, which are either External, as Stones, Pins, sharp and Corrupt food; Or from Causes Internal, as sharp corrosive humours, Worms. 3. From Diseases as Intemperature, Tumours, Wounds, Ulcer, &c.

IX. *Pal-*

IX. *Palpitatio Cordis*, is an immoderate and unnatural beating and trembling of the Heart; it is caused, either through thick humors, oppressing the Pericardium, or Tumors there, or in the Arteries of the Lungs; or preternatural Heat, or defect of Spirits, through Anger, Joy, Fear, Shame, &c. it may be known by feeling, and the Humor abounding, from the general Habit or Constitution.

It differs from Tremor or Trembling of the Heart, because Tremor shifts its place, the Palpitation is fixed to one place alone. The Disease is evident to the Senses, viz. sight, touch, hearing, the Pulse is unequal and inordinate: 'Tis caused from any thing irritating the moving Faculty, or from want of refrigeration, by reason of a hot Distemper, or from defect of the spirits. The Differences arise from the Causes. 1. From Vapors or Wind, exciting and irritating the expulsive faculty of the Heart, wherein the Paroxysm comes as it were by surprize or unexpected, and is excited by every light and gentle motion of the Body, a trembling often seizes on the knees, and a dimness upon the Eyes. 2. From an Humor, and then it invades not so unexpectedly, but continues longer: This humor is watery, either without malignity, having its residence in the Pericardium, causing a suffocation as it were of the Heart; or else it is with malignity, and poisonous, and then there is a various Pulse, as to greatness and smallness, with some symptoms of Venom. 3. From a Tumor, which if it be hot, hard, and in the

Pericardium, the sick wastes and wears away by degrees, without any apparent cause. 4. From Worms, which are discovered by a Convulsion. 5. From a defect of Spirits. 6. From a hot Distemper of the Heart.

X. *Syncope*, Swooning or Fainting, is caused either Externally through Fear, or Internally by Wind, Emptiness, Plenitude, or sharp Humors oppressing the Heart: Each Cause is to be discerned by Chap. 44. 45. 46. Lib. 1.

It is a sudden failing of the Spirits, Vital powers and strength, accompanied with an almost abolished pulse and cold sweat, through weakness of the Heart. It has various names, according to its difference in Degree. *Ecclipsis* is a small and light fainting: *Leipothimia*, is somewhat more greivous: *Syncope* is the most sad of all, to wit a perfect Swooning: which if the Pulse is totally abolished, in the whole body, it is called *Asphyxia*. The differences are taken from the Causes. 1. From defect of spirits not being generated. 2. From a too great dissipation of spirits that are generated, caused either from insensible transpiration, by the too openness of the Pores; Or manifold evacuations by sweating, bleeding, purging, vomiting; Or by extreme pains and want of sleep; Or too much use of Venus. 3. From Corruption of the Spirits, as by poison, biting of venomous Creatures. 4. From suffocation of the Spirits, by Blood, Humors, Vapors, and sudden Terror or Fear.

XI. *Pica*, *Citta*, *Malacia*, a depraved Appetite, is that which desireth to eat hurtful things; as Salt,

Salt, Ashes, Coals, Chalk, Spices, unripe Fruits, &c. it, for the most part, happeneth to Maids or Women with Child, in both which cases the Courses are stop't: the thing desired shews the Cause; for if they eat Coals, Salt, &c. it shows salt, burnt Humors abound.

The Cause is a sad sense of sucking, molesting the Mouth of the Stomach from a vitious excrement or matter, imbibed or impacted in the Coats of the Stomach, either acting by its whole substance, or by a manifest quality, arising from an evil course of Diet, or sent from some other part, as the Womb; whereupon it is familiar to Childing Women, about the second or third Month; and at the beginning while the causes do alter, there is raised a desire of contrary things, which by long custom are made familiar.

XII. Vomitio, Vomiting, is generally caused through weakness or foulness of the Stomach: Weakness is known from the Antecedent Causes, as Emptiness, Watchings, Anger, &c. Foulness is either from a Plethory or a Cacochymy: the which is discerned by Chap. 44. and 45. Lib. I.

Vomiting is a praternatural motion of the Stomach, casting up with violence through the Throat, the matter contained in the Cavity of the Stomach: the part affected is generally the Stomach; sometimes by consent, the Liver inflamed, sometimes the Diaphragma, sometimes the Pancreas. The Cause is what soever can offend the upper Orifice of a weak Stomach, and irritate it to expulsion, either by its plenty, or

its biting quality, proceeding either from a pituitous matter, sticking to the wrinkles of the Stomach; or from Choler, or the Pancreatick juyce. Or, it may proceed from the nature and disposition of the Stomach, the folds or wrinkles being often too loose, that then they do not shut the Orifice of the stomach, as being excoriated or tumified. Or it may be caused from matter taken in as poysons, sharp things, &c. The Differences are, that it is either Idiopathick or Sympathetick; caused by a Disease, or outward causes; Critical and Symptomatical: Idiopathick is by a distemper of the Stomach, as an Aposteme, Ulcer, &c. Sympathetick, from hurt of another part, as an Inflammation of the Liver, Diaphragma. &c. By a Disease, as the Stone in the Kidneys, Isack, &c. By outward causes, as a Blow, Fall, bad Food. Critical when ease and help follows it, Symptomatical when it is either Bloody, Malignant, or Scorbutical. If the Vomit comes through an Ulcer of the Stomach, or an Inflammation of the Liver, the Hiccough always accompanies it: Choler shews it self by its bitterness. the Pancreatick juyce by its sharpness; the like of other Excretions.

XIII. Inappetentia, Anorexia, want of Appetite, is caused, either through Fulness (as in Gluttony) or Obstruction of the Meseraicks (when any unnatural Evacuation is suppressed, as the Terns, Hemorrhoids, &c.) or through a simple Distemper of heat or cold; by Chap. 41. Lib. I.

'Tis caused from the defect of the sense of sucking in the upper Orifice of

of the Stomach: The Differences.

1. From the Magnitude: one is greater which is properly called Anorexia, in which nothing at all is desired: Another is less, called Dysorexia, in which some meat is desired, but less or later than Nature requires, which comes from the faculty of sucking weakned. 2. From the Quality: one is without nauſeousness or loathing of Food: Another with loathing. 3. From the Cause: by reason of the want of sucking, where there is either abundance, or too much nourishment in the Body; Or an impotency of the Stomach; Or weakness of the Attractive Faculty; Or hindrance of Transpiration by constipation of the Pores, and thickness of the skin. 4. From Insensibility; wherein the sense of sucking is not perceived, caused by Diseases of the Brain, in which either the Nerves or the sixth pair are affected, or the Animal Spirits are not generated, or their influx is hindered; Or, (which generally falls out in acute Feavers) they do languish; Or the Faculty, (as in the Phrenitrical) is perverted.

XIV. Dog-like Appetite. It is a continual, insatiable desire of Eating, arising from a vehement sense of sucking in the mouth of the Stomach. It is accompanied sometimes with a Vomiting, sometimes with a Looseness. It is twofold. 1. From too great want of Nourishment in the Body, or from Worms feeding on the Creature. 2. From cold, acid and austere humors wrinkling the mouth of the Stomach, compressing and rwiching of it, as sour Flegm and Melancholy, put forth into the Stomach, the

which is always manifest by a cold and moist Distemperature.

XV. Bullimus, A great Appetite periodical, which oftentimes ends with a nauſeousness or loathing and fainting away, with loss of strength, proceeding (as most Physicians suppose) from a cold and moist Distemper of the Stomach; It is wont often to happen to those that make long journeys through deep Snow, or in exceeding cold Weather. It is said to be Periodical, because it doth not continually afflict the Patient, but returns at set times.

XVI. Poludipsia, Excessive Thirst; it is a vehement desire of much and often drinking, from a violent sense of sucking in the mouth of the Stomach, from a defect of humidity either in the nutriment or parts altering. 1. From defect of humidity of the Stomach, arising from things that can waste moisture, as great labour, watchings, fastings, immoderate Evacuations, &c. 2. From dissipation of the said humidity, caused by heat, and accompanied with loathing of food, roughness of the Jaws, with a bitter, salt, nitrous taste, arising either of it self, or from external things, hot Air, hot potions, vehement motion of the Tongue, sharp, salt meats, poisons, &c. Or from internal causes, as Distemper of the Stomach, &c. Or from other Diseases. as from a Feaver, heat of the Lungs, Dropsy, &c. 3. from Alteration of the Humidity; either with or without a Feaver, by Choler or salt Flegm.

XVII. Concoction hurt. It proceeds from a fault of the

Concoctive Faculty, which either concocts not at all, or but weakly or depravedly. It is threefold; 1. ἀπεψία *Apepsia*, Concoction quite abolished, which proceeds from a privation of the alterative Faculty, whereby the nutriment descends crude into the Guts. There is belching 6 or 7 hours after meat, savouring of its nature and quality, casting it up unconcocted, or voiding it so by stool. 2. βραδύτης *concoctio difficilis*, weak or slow concoction, when the meat is left either half crude, or not digested as it should be, but in a long time through weakness of heat and a cold Distemper. 3. διαψήσια, *diaphthora*, a depraved Concoction, or a corruption of the meat, and change of it into a strange quality, by reason of the deprivation of the concoctive faculty of the Stomach; tis most commonly caused from a hot Distemper of the Stomach, which burns up, putrifies and corrupts the meat, there are nitrous belchings, adust, acid, fat, or stinking, which are often attended, with a grumbling noise of the Belly, biting pains, vomiting, stinking stools, impatience of hunger, anxiety, &c.

XVIII. *The Hiccough.* It is a Convulsive motion of the Stomach, consisting of a distention and dilatation of the Fibres of its upper part, by which the expulsive faculty is irritated, with a noise and vehement contorsion: it is caused from matter residing in, and afflicting the whole Stomach, by some inimical property, either by pulling it, or compressing it. *The differences.* 1. From External Causes, as cold

Air, cold Drink, cold Meats, Sharp Nutriment, corrupt Food, and poison. 2. From Internal Causes; as hot and sharp humors, cold and pituitous humors, wind, matter from inflammation of the Liver, and internal Diseases, as an inflammation of the Brain, Liver Spleen, Stomach, Womb, Feavers, &c.

XIX. *Distemper of the Lungs.* It is a receding from their natural temper, to that which is preternatural, either from External or Internal Causes. The External Causes, are things hot and cold, improper Medicaments, &c. The internal are from humors that are drawn thither from the Head, Liver, Spleen, or some other part. It is, first without matter, wherein there is no danger of Suffocation: secondly with matter, which obstructs the part. Thirdly, Hot, which is known from the Cheeks being red, so made by the fumes ascending, dryness of the Tongue, thirst, swift and frequent breathing. Fourthly, Cold, known by cooling causes going before, the breathing and Pulse weak, slow and rare, and the breath colder than ordinary. Fifthly, Moist, known by hoarseness of the Voice, breathing thick and often, with a kind of wheezing and much spittle. Sixthly, Dry, known from the Patients wasting and consuming, without any Ulcer at all, breathing weak, short and thick, continual thirst, and but little spittle.

XX. *Wounds of the Lungs.* They are known by difficulty of Breathing (the Organs being hurt) casting out of froth and blood, by the Mouth, with a Cough;

Cough; by spitting up of red and froathy Blood, out of the Breast without any pain at all; by swelling and shutting the veins of the Neck; and lastly by the several colours of the Face, one while red, and as soon pale again and wan: now these Wounds happen. 1. Either in the fleshy substance of the Lungs, *and then the Blood falls into the cavity of the Thorax, without spitting of blood or any Cough, the breathing is with difficulty, with a vicissitude of heat and cold, from the exhalations which breath out of the Heart.* 2. Or in the Veins of the Lungs; *and then there flows forth Blood, somewhat red, blackish and froathy in a large measure, and a continual Cough, unless the Lungs be oppressed by Blood, or there be a decay of the natural strength.*

XXI. *Phtbisis*, An Ulcer of the Lungs, commonly called a *Phtbick*. It is a consumption of the nourishing juyce, by means of an Ulcer in the Lungs, caused by a sharp corroding matter and Cough. The part affected is mostly the Lungs, which being increased and waxing every day worse and worse, the Stomach, Pancreas and milky Glandules of the Mesentery do also suffer. *The Cause is from 1. Crudities in the Stomach; 2. The Pancreatick juyce, mixing it self with Choler in too great a quantity; 3. From thence the Chyle being as it were curdled, the hicker part of it cannot be percolated, through the milky Glandules of the Mesentery; 4. This thicker part of the Chyle not percolated, sticks to the Glandules and hardens them so*

that none but the serous part of the Chyle can come to the heart by the *Thoracical ductus*, by which occasion the humors are made every day more sharp, which sharpness in time gnaws the Vessels asunder: 5. A salt, sharp Catarrh, falling from the Head upon the Lungs: from whence the Orbicular and *Sinuous* little Bladders of the Lungs (lately found out by the famous *Malpighius* of which the Learned *Willis* has taken special notice) are filled with a *Lympha* thicker than ordinary, causing a Cough and difficulty of breathing. This is one of the kinds of Consumptions, which we have mentioned before in Sect. 7. of this Chapter. *The Differences of a Phtbisis are twofold: 1. From the Causes. One is from the Blood, which being got out into the Lungs, there coagulates and putrifies. Another from a sharp humor, either serous or cholerick, sent from the Head, Heart, or some adjacent part, which causeth a continual Cough, while it is circulated with the nutritious juyce of the Heart. Another from sweet Elegm, flowing from the Lungs in too great a quantity, where obstructing the branches or lappers, it makes them over moist, and by its long stay putrifies there. Another from Pus, or a stinking matter upon breaking of an Apostema of the Lungs, a Quinsy, Pleurisy, &c. Another from Contagion, viz. from the breath of the Phtbical, which generates this Disease in persons perfectly well: to this add that of the Sea Hare, viz. the smell thereof which corrodes and eats through the Lungs,*

by its specifick poisonous quality. 2. From the continuance. One is Recent and but newly begun, in which the Symptoms are not so violent. Another is confirmed, and of long continuance (properly called by the Ancients, an Ulcer of the Lungs) caused by a thick humor adhering too long, to the forementioned little Bladders of the Lungs, thereby creating an Ulcer, and hindring the circulation of the Blood; the spittle is first white and light, after it sinks a little, then putrefies, but this is as to the quality; if the matter offends in quantity you will find an Aposteme or an Empyema. The Signs of a Phthisis beginning, are a puffing up of the Stomach, swelling up of the whole Belly, Anxieties, sometimes a palpitation of the Heart, a dry Cough, lost Appetite, extenuation of the Body, or heaviness, with a continual little Fever. The Signs of a Phthisis confirmed, are 1. A gentle and moderate Fever, from Vapours arising from the Lungs, and assaulting the Heart: 2. A continual Cough, without any great pain, and afflicting most in the night time: 3. A bloody and purulent spittle (but this is not in all, for some spit up a liquid yellow matter,) proceeding from the substance of the Lungs, but it is then generally frothy: 4. An extenuation, consumption or leanness of the whole Body, from the præternatural heat of the aforesaid Fever: 5. The Appetite is greater than in the beginning, but uncertain: 6. The breath becomes very difficult, and is hardly drawn, by reason of the imbecillity of the Faculty, and Obstructions of the Bronchia, or Lappets of the Lungs.

7. The Pulses are sometimes slow, sometimes quick and swift, sometimes hard, sometimes soft: 8. Sweats in great abundance break forth in time of sleep, through weakness of the natural Faculties: 9. The hair sheds and falls off, by reason of the want of Nourishment, and corruption of the parts: 10. The Nails become crooked, through wasting of the Flesh, which used to be at the Fingers end: 11. A small kind of Lice, which are generated from the corruption of the Nourishment: 12. The extreame parts, chiefly the feet, swells much, by reason of the extinction of natural heat: 13. The skin grows blackish and dry: 14. The spittle sometimes green, sometimes of other colours, thick, and being put into the water sinks to the bottom: 15. At length the Disease having got the upper hand, certain small bits and portions of the putrified Lungs, are spit or cast forth, with great strength: 16. Lastly a Diarrhœa follows (with a suppression of the spittle) through weakness of the retentive Faculty; the Patients skin sticks to his Bones, his Cheeks and Jaws long and thin, Eyes (as it were) sunk into his head, with a very horrid and gastly Countenance.

XXII. Vices of Breathing. They are fourfold, viz. Macropnœa, Tachypnœa, Dispnoea, and Apnœa. 1. Macropnœa, which is a great respiration, exceedingly distending the Breast, through drawing into it abundance of Air, caused by the violence and heat of Fevers, by which the Heart is inflamed. 2. Tachypnœa, which is a respiration greater and swifter than natural, which arises from the heat

heat and sooty Fumes, either of the Heart, Lungs and Breast; or of sharp and putrid Humors. 3. *Dispnoea*, which is a difficulty of breathing, from default of the Organs themselves: it arises first, either from things External, as mineral Fumes, smoak of Coals, Lime, &c. Or things Internal, as streightness of the Vessels, either by Obstruction or Compression; or extream dryness, when the Lungs are so consumed by an Ulcer, that they can no longer be dilated. secondly, Or from their own Essence, or by consent of the Thorax, Diaphragma, Liver, Spleen or Stomach being distended or otherwise hurt. Thirdly, Or from the matter creating, which is either less, and then the breathing is thicker, more frequent, and without any noise or panting: Or Greater, and then the affect degenerates into Asthma. 4. *Apnoea*, which is the taking away all sensible respiration, accompanied with an extream danger of Suffocation. This happens sometimes after eating of Mushrooms, sometimes in a sad Suffocation of the Womb, as also in a Syncope or swooning Fits.

XXIII. Tumors of the Dugs.

What we comprehend under this Title is threefold, viz. from Blood, Flegm and Wind, which are an Inflammation, an Oedema and a Ventosity. 1. An Inflammation is a hard swelling, red, painful, inflamed, and beating, (by which it differs from the curdling of the Milk) caused by great store of Blood that is attracted, transmitted or suppressed. 2. Oedema, a white Tumor diffused or spread abroad through the whole Pap

or Breast, making it equally to swell; it is known by its softness, and that at Intervals (viz. the times that the Courses flow) the swelling and pain is exasperated, and made greater. 3. Ventosity, inflation or a windy Tumor; it is known from the very acuteness of the Pain, especially in the left Breast, with an excruciating tortor of the Arm, the whole sides, ribs and shoulder blades: It is caused from an exhalation or vapour from the Seed, Menstrua, or some other Excrement suppressed.

XXIV. Scirrhus of the Dugs.

It is either *Exquisite* or *Spurious*.

I. The *Exquisite* is either *Recent*, which upon touch is painful, whereby it is distinguished from a Cancer beginning (Or *Inveterate*, which is hard and without pain: It is also either by *Congestion*, by heaping up the thick humor together; or by *Resolution*, in which the thinner part is dried up, by unnatural or unfit Medicaments. 2. The *Spurious* or *Bastard Scirrhus* is known by this. that the Tumor is bigger than in a Cancer, of the colour of Ashes, with hardness, the Veins thereof somewhat black and blewish in the outward parts, and if a Woman, it vexes her about the flowing of her Courses: It comes of black *Choler* mixt with *Melancholy*, in those who have their monthly Courses suppressed, or are Barren, or which have soon ceased Child-bearing.

XXV. Cancer of the Dugs. The Signs you may learn from what we have before said. in Chap. 48. Sect. 26. This we farther Add, that the Cause is from adust and

black Choler lodging in the Veins, which by reason of its thickness cannot be carried along. *The differences are Twofold: 1. From the Cause; which is either from falls, blows, and external hurts, Or from a Melancholy juyce, stoppage of the Courses, Hamorrhoides, &c. 2. From the Form. It is either Exulcerated, which has the appearance of Corrupted Flesh, great stench, filthy matter issuing, and an horrid Aspect, with lips very hard and turned in, slow Feaver, sometimes Swooning, and black, yellow or blood like Sanies; Or not exulcerated, the humor being much more mild and gentle.*

XXVI. Distemper of the Stomach. It is either without matter, or with Matter. **I. Distemper without matter.** It is a preternatural disposition of the Similiar parts of the Stomach in its qualities, produced by both Internal and External Causes without the presence of any humour: *One is hot, having no great Appetite, bitter Belchings, Clamminess of Spittle, dryness of the Jaws and Tongue, arising from the Six non naturalls increasing heat, or from Burning Feavers, Inflammation of the Liver, Spleen, &c. One cold, having great Appetite, Sour Belchings, &c. One moist, known by want of Thirst, much Spittle, &c. arising from external Causes inducing moisture. Another Dry, known by Contraction of the Region of the Stomach, with slenderness of the whole Body; it arises externally from a drying diet; internally from the dryness of the adjacent parts. Another hot*

and dry, they have little Blood, unfit for Nourishment, are Lean, Bound in Body, Veins Eminent, and Subject to the dry Scab. The other Compound Distempers Judg of by the Simple in like manner. See Chap. 41. Sect. 1, 2, 3, 4. Of this Book. **II. Distempers of the Stomach with matter.** It is when the Stomach falls from its Temper, by reason of some humour generated there, or falling from some other place. *It is manifold. 1. From matter generated in the Stomach, then the Symptoms are continual, the whole Body and all its Members being sound. 2. From Matter sticking in the Cavity of the Stomach, and then there is a Nauseousness attended with Vomiting or Loosness. 3. From a Cholerick humour hot and dry, known by loathing, bitterness in the Mouth, with a sence of gnawing; and sometimes Cholerick Vomitings; it is caused either from Choler generated there of Corrupt food, or sent thither from the Bladder of the Gall. 4. From a Flegmatick humour, cold and moist, the Sick has a sence of heaviness in the Stomach, chiefly some hours after eating, with a Wateriness, and sour Belchings, proceeding from a thin or thick pituitous matter.*

XXVII. Tumour of the Stomach. It is when in its Cavity there is a Swelling or Magnitude more than natural. *It is four fold. 1. Inflammation, which is discerned by the General Signs, also vehement pain, heat, thirst, burning Feaver, Vomiting or often going to stool, with the Symptoms of the principal faculties if the* Brain

Brain drawn into Consent. It comes of Blood derived from the Vena Porta, preternaturally poured out by the Veins. 2. Oedema, a flegmatick Tumour. 3. Scirrhus, a Melancholy Tumour. 4. Inflation a Windy, which is when the Magnitude of the Stomach is augmented by Wind contained within its Cavity, known by distention, hurting the Region of the Stomach above the Navel; by the Tumour, by its resisting the Touch, and by Belchings, by which the Sick is eased; it arises from Windy Nutrient, or from a Flegmatick matter causing Wind by Obstruction.

XXVIII. *Ulcers of the Stomach.* An Ulcer of the Stomach is known by a pricking pain, and a troublesom heat above the Navel, caused by the receiving of too hot meat or drink; there is stinking Belchings, and a slow Feaver. It is caused. 1. From External things, as food or Drink scalding hot, sharp Medicines, Poysons. 2. From sharp Humours either generated there, or derived from other parts. 3. From an Aposteme (after an Inflammation) broken there. 4. From the Rupture of a Vein, and then Vomiting of blood is perceived.

CHAP. LIV.

Of Diseases of the lower Ventricle or Belly.

I. *Colicus dolor*, the Cholick is a Pain bred in the Gut Colon, caused either of Flegmatick Humours falling down within the thin Skin of the said Gut; or of Wind; or Inflammation of the Gut; or through sharp and gnawing Humours, which vehemently afflict the same and dissolve its Continuity: if it comes of Phlegm, the Pain is just under the Mouth of the Stomach, where the Gut Colon lyeth; having a desire to vomit, and yelk: if of Wind, there is Extension, stretching forth and swelling of the Abdomen: if of Inflammation, there is an inward

burning Heat, with a Feaver; they are bound in Body, have Stoppage of Urine, Thirst, and vomiting Choler: if of sharp Humours, there is Burning, Thirst and Watching, with a small Feaver, sharp Urine and painful going to Stool.

There is a vehement pain in the great Guts, chiefly in the left Groin, where the Colon is narrower, a puffing up of the lower parts of the Belly, loathing, belching, Vomiting, difficulty of Urine, with a suppression of Excrements and Wind. 'Tis known from the Stone in the Reins, because it pricks more, possesses a greater space, is increased

after meat, is wandering, and does less afflict the back and thighs : and from the pain of the Womb, because that seizes for the most part upon the stoppage of the Courses, afflicting the Hips and Groins. The Differences are Manifest. 1. From the part. One is of the whole Gut, in which the pain is in both the Loyns, and below the Region of the Stomach near to the Navel. Another is in a part of the Gut ; if in the beginning of it, the pain is in the right Loyn : if in the middle of it, in the left : if in the end of it, the Region of the Navel next to the left is pained. 2. From Diseases, as Worms, Inflammation of the Guts, the Stone. 3. From Humour thick and Viscous sticking between the Coats of the Guts, then the pain is, as if a stake were driven through them, nor is it assuaged by belching or breaking Wind, but the Gut is corroded by Glassy Flegm. 4. From sharp Cholerick humours sticking in those Coats and Vessels, known by the acute pain, thirst, bitterness of Mouth and Watchings. 5. From Retention of hard Excrements. 6. From Wind retained, known by Swelling of the Belly and a rumbling Noise. 7. One Exquisite, of which all that we have hitherto spoken is intended. Another Spurious, whose cause is either in the Peritonæum, or in the Membranes spread over the Abdomen, and parts of the Belly, 'tis known by the Violence and durability of the pain, being commonly Critical to long continued Fevers,

II. *Iliaca passio*, is a Disease of the small Guts, with most horrible Pains, caused through Obstructions of the Bowels and

Cold, with Putrefaction of the Food : it is known by vehement Pain, overmuch Moistness of the Stomach, Belchings, without any ease, rumbling of the Bowels, Wind and Stoppage of the Dung : if it encreate, he avoideth all his Excrements upwards, vomiting up Phlegm and Choler hence follows Swellings under the Eares, difficulty of Breathing, Stoppage of Urine, with Coldness of the whole Body and great Pain.

Or, the *Iliack* is an acute pain in the small Guts, arising from a Violent Solution of Unity, with a tumor of the Belly, and so great obstruction there, that nothing goes downwards, but the humors and Excrements are sometimes violently cast up by Vomiting : It is called *Volvulus*, *Miserere mei*, & *Chordanusus*, because the Guts are extended like a Chord. The part affected is the Ileon Gut, and the other small Guts. *Hildanus* observes, that the first beginning of this Disease is about the *Cæcum*, and therefore saith he, I think that the Valve (which the famous *Bauhin* found in the beginning of the Colon) is so contracted and nipt together by the Inflammation of the *Cæcum*, that no excrements can pass by ; and that the whole Inflammation does so increase, that the whole Ileum and the adjacent parts do *Gangreen* and *Sphacelate*, as I have observed in all I have hitherto dissected. The same testifies the learned *Riverus*. The Antecedent or remote Cause is chiefly *Choler* (and as *Hippocrates* proves in his Book de *Glandulis*, Text. 9.)

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Sometimes Flegm, great Exulcerations, sharp humors and Wind, whence comes pain, Inflammation, hardning of the Excrements and corrosion. The Conjunct cause. is the Solution of Continuity from obstruction, and sharpness of the matter. The Differences. 1. It proceeds sometimes from things External, as too hot or cold Air, immoderate eating of Pease, Beans, crud fruits, taking of Poysons, &c. 2. From Internal things as corrosive humours, obstructions. 3. From Diseases of the Neighbouring Viscera, as a Rupture called Enterocoele, from whence sometimes proceeds an Inflammation and Gangreen, as Hildanus has observed: as also from an Inflammation, other Tumours, and an Ulcer. 4. From Excrements hardned. 5. From the Strangury and from Wind, as Hippocrates himself testifies. 6. From the twisting of the Guts, which the Learned Sylvius can scarcely believe; he saith, it is the Enterance of the small Gut in any part straightned into the next part which was more opened by the Wind, which Ingreds of the small Gut may be either of the Upper part into the Inferior, or of the Inferiour into the Upper: *Sylvij. Prax. lib. I. cap. 15. Sect. 18, 19, 20, 21.*

III. *Dysenteria*, a Bloody Flux, is nothing else, but an Exulceration of the Bowels, known by much Pain and bloody Excrements: when the small Guts are exulcerate, there is Pain about the Navel, the Excrements are of a Lead Colour, and sometimes of sundry Colours, with much gnawing: but if it be in great Bowels, the

Dung is pure, and much heaped together, coming out with Wind, Froathinels, Fatnels, and Blood alone.

The sick goes often to stool, sometimes continually if there be sufficient matter, sometimes it returns every third day; and the pains are chiefly, a little before going to stool. A Feaver sometimes comes presently at the beginning, sometimes after the Disease has been some days. The parts affected are the Guts both Small and Great, with a Solution of Unity in their Tunicles; and sometimes the Stomach suffers and causes the Flux. If the small Guts are affected the pain is more sharp: If the Great Gut, alone more dull. The Cause is either External, from unripe fruites, strong attractives, Corrosives, Poysons, &c. or Internal from sharp Saline choler, and an Acrimonious Pancreatick juyce, corroding the Guts. The Differences. 1. It is either in beginning, wherein one single Tunicle is Corroded; or perfect, where the Corrosion pierces deeper and all the Coats are corroded, voiding by stool either fibres and small strings, or peices of fleshy Substance with blood, being the proper Substance of the Guts. 2. Sometimes the small Guts are only affected, sometimes the great; sometimes both. 3. Sometimes it proceeds from things External, sometimes from things Internal. 4. Sometimes it is Continual, sometimes Intermitting, and sometimes Periodical. 5. Sometimes it is Simple, sometimes Epidemical, and sometimes Malignant. 6. Sometimes it proceeds of Salt Flegm, sometimes of yellow Choler, sometimes of Green Cho-

Choler, and sometimes of black Choler or Melancholy.

IV. *Lienteria*, is a Flux of Matter Or the Nutriment in that form it was received, from a fault of the Retentive faculty of the Stomach, and Expulsive Faculty of the Guts ; generally following a *Dysenteria*, in which the Bowels do not hold the Excrements till they be perfectly digested, by reason of their slipperiness : the Sick tastes nor feels his Meat, continually goes to Stool, having crude, pale Excrements, without any commixture of Blood or Choler.

The Differences are taken from the Causes, 1. By fault of the Retentive faculty, which is caused either by too great a refrigeration of the Guts : Or, by a cold Distemper, arising from Flegm generated there, or covering the Wrinkles of the Guts : Or from a Continual Looseness ; Or from a strange continued inbred quality, by an evil air, or eating Melons, Cucumers, Mushrooms, &c. Or from a thick and smooth Scar ; commonly following a great *Dysenteria*, and a deep Ulceration. 2. By Fault of the Expulsive Faculty, caused either from an Ulcerous disposition in the Superficies of the Guts and Stomach like Pustles ; Or from sharp humors, either generated there or falling from some other part chiefly the Liver : Or, Lastly from taking of Poison.

V. *Diarrhœa*, a Looseness, is nothing but an ordinary Flux of the Belly, wherein Excrementitious humors stirring up the Expulsive faculty of the Stomach

and Guts, do flow forth without an Inflammation, Lientery, Exulceration, Tenesmus, or any strong Sense of Pain. The cause is whatsoever does preternaturally irritate and encrease the Expulsive faculty of the Guts, and debilitating or destroying the Retentive, whether it be Essential in the part or by consent.

It is either from things External as purging Medicines, Poysons, crude fruits : or Internal, and that either from the whole Body with a Fever or without a Fever, or from some part : And that either from a Colligation of the whole part, or Simple distemper of the Guts from Worms, or Obstruction of the Meseraick Veins : or lastly from consent of other parts, as the Brain, Stomach, Liver, Spleen or Womb obstructed.

VI. *Tenesmus*, is a continual desire to go to Stool with pain, without voiding any thing, except some filthy Matter, like Snevil, being generally caused through Cold.

Sometimes the Right Gut falls forth, and a dropping or difficulty of Urine happens, by reason of the proximity and consent of the parts. The Cause is from whatsoever is fixt to the Extreame part of the Right Gut, and can stimulate its Expulsive faculty. The Differences are taken from the Causes: 1. From the too great cooling of the right Gut. 2. From the Stone, or Worms, of which see in their proper places. 3. From a Cause producing a *Dysentery*. 4. From black *Cholerick* humours,

or Salt and Flegmarick sticking to the same.

VII. *Hæmorrhoidia*, the Piles, proceed of Melancholy Blood, flowing down to the Veins in the Fundament: of these some be blind, which send out none or little Blood, and some be open, which send forth much Blood; in the Blind there is vehement pain, especially in going to stool.

Or Thus; The fault of the *Hæmorrhoidal Veins* is either, 1. From too great a flux, casting forth much Blood by those Veins, black, fæculent and thick; first it comes forth as it were by drops while the Arse is wiped, afterwards of a good and ruddy Color, and then at last yellowish and pale, whence the Thighs grow weak, the Hipps feel a heavy pain, and the Color of the face is depraved; it is caused by all those things which hurt the retentive faculty of the Veins and Arteries of the Liver or Spleen or irritates their expulsive faculty.

2. From a Suppression of the *Hæmorrhoides*, wherein the Blood endeavouring to get forth through the Veins of the Anus, is intercepted and stopt, whence are raised up Tumors with pain: the Tumours bunch out in the head of the Veins of the Anus, sometimes hard and like unto Warts; sometimes soft like to Mulberries, sometimes of a purple Color, and like to grape stones; the pain is sometimes more Violent, sometimes more remiss, according as the Veins are distended, whose Mouths hang as it were out of their Heads with an Extension of the Membrane which covers the Orifices of those Veins. The Differences are

Taken. 1. From the Causes, which is from default of the blood, being too much, and then there are Signs of a Plethory: Or too sharp and thin: Or from a flux of Blood from the Liver, Mesentery, or Guts: Or a Rupture of these Veins. 2. From the Parts, which is either Internal, arising from a branch of the Spleen extended throughout the Mesentery about the Colon and Right Gut, in the Muscles of the Anus, and inward part of the Gut, having an Artery joyned with it, that is alone there terminated: known by a Weight about the fundament, difficulty of going to stool, &c. Or External, proceeding from the Epigastrical branch of the Vena Cava, and are disseminated to the External parts of the Intestinum, rectum, viz. the Muscles of the Anus, which are two, having an Artery joyned to them from the Hypogastrical Artery, seeming all to have communion one with another: it is known at sight by the Magnitude of the Tumors. In the differences of the Internal and External hæmorrhoids you must be knowing: the suppression of the first may be perceived by the the Squeezing of the Anus, and thrusting up a Probe: the latter are obvious to the Sight.

VIII. *Lumbrici, Vermes, Worms*, of which there are three sorts, First, *Teretes*, which are round and about a hand or two breadth in length: secondly, *Lati*, which are broad and of incredible length, I once saw one of thirty foot long; *Pliny lib. 2. cap. 33.* saith they are seen three hundred foot, or more, long: thirdly, *Ascarides*, which are thin, short and small; found most com-

commonly in the Right Gut, and in the end of the Fundament. They that have *Teretes* do feel great gnawing of the Bowels and Stomach, have a dry small Cough, some leap up in their sleep and lye down again; some put forth their Tongue, fret and fume: Children in sleep do as though they were eating Meat; the Body wasts, and grows lean without reason. Broad Worms do bring continual gnawing of the Stomach, with an incorrigible Appetite, Slenderness and Weakness of the Body; the most sure Sign, is things like Cucumber Seed avoided with the Excrements. *Ascarides* do excite an Itch in the Fundament, provoking to Stool often, the Sick being generally better after going to Stool then before.

They are preternatural creatures generated out of a thick clammy, and Viscous humor, having in it a principal of Life in its kind, which is raised up by heat and putrefaction. The humor generating them arises from too much eating, especially of things raw and crude (as unripe fruits) and meats that easily Corrupt, and generate a thick juyce, as cheese, pulse, decayed fruits, and things sweet, honied, fat and Oily: for all fat things generate Worms strangely. The common Signs are 1. A stinking breath. 2. Disturbed sleep with Skipping, Trembling, Noise, and gnashing of the Teeth. 3. Itching and often rubbing of the Nose. 4. A pale face and sometimes by fits ruddy. 5. Dark and hollow Eyes, the whites of a pale Yellowish color. 6. Drivelling at the Mouth more than ordinarily.

7. A distention and puffing up of the Belly, and a grumbling Noise. 8. A gnawing in the Belly, and that increased when hungry. 9. Sometimes a Loosness, Vomiting, Faintness, Falling sickness. 10. If in a morning, while the Child is fasting (if its age will bear it) you sprinkle cold water on the Mouth of the Stomach, they will all gather together, which is a most sure Sign. *The Differences.* 1. *Teretes*, worms long, smooth and round: they that have those have a more Vehement gnawing of the Stomach and Belly, a more frequent dry cough, hiccough, nauseousness, fainting at heart, disturbed Dreams, motion of the Jaws, with Trembling, ris'g up, crying out. 2. *Lati*, Broad Worms, and of Incredible length as a yard long, 2, 3, 4, 5, 8, or 10, Yards long, or more; in which the excrements are not unlike to Gourd Seeds, there is an unsatiable desire of meat, continual pain in the Stomach, either on the right or left side, with great leanness and wasting of the Body. 3. *Ascarides*, thin, small, short worms, an inch or two long: commonly there is a continual pain, and trouble some itching about the Fundament, heaviness in the back, continual motions to Stool, &c.

IX. *Obstrutio Hepatica*, Obstruction of the Liver, is caused either of gross Vapours or Humours, their Excrements are moist, white or chylous, Urine white, thin and watery, the sick is purfie, yet most commonly the Body lean, and dull, the Face pale; a heavy and obtuse Pain or Pressure in the right Hypochondria, after eating with ill digestion

tion; if the pain be heavy and fixed, gross humors are the Cause; Distention, Wind.

This Disease is a narrowness of the vessels, in the Liver, caused by something filling up the Cavities, and hindring the distribution of the Nutriment, which ought to be produced and carried through a Vein from the Porta, dispersed through the substance of the Liver, in most of the Branches, and others no less small from the Vena Cava, all in this Disease obliterated. The Cause is matter generated there, or in the very substance of the Liver, either by Distemper, or some external error; or else from Flux of matter from other parts through hurt of the attractive faculty. The differences. 1. From the continuance it is either Recent or Inveterate, which causeth putrefaction, Feavers, Jaundice, Scirrhus, Dropsy. 2. From the Place. One is in the hollow part of the Liver, then nothing is perceived outwardly, but the Stomach being drawn into content there is loathing, vomiting, thirst, liquid Excrements. Another in the Gibbous part, known by pressing the Belly on that place, it doth resist the Midriff, and the excrements appear bloody. 3. From the Cause. One is either from pure Blood, Or from hot cholerick Blood, Or from Flegmatick Blood, thick and viscous. Another from Wind, which is gross, and shut up under its Coat, or sticking in the Veins, wherein the pain is greater, but not continual, and a great Tumor in the right Hypochondria, that the end of the Ribs cannot be perceived.

X. *Icterus*, the Yellow Jaun-

dice, est bilis per universum corpus effusio: It is caused by the Obstruction of the Gall, with Flegm, Choler, or a Stone bred therein; there is pain in the Head, and right Hypochondry, with hardness too, yellowness of the Skin; especially the whites of the Eyes and Cheeks, cholerick Vomittings, Hiccoughs, bitterness of the Tongue, and distention of the Veins under it, the Belly is generally Bound, and the Urine so yellow or reddish as that it will dye a piece of Linnen Cloath.

'Tis called by some Galgulus; from the name of a small Bird: Arquatus, from the variety of colours in the Rain-bow: Regius, because tis tenderly handled at Court. The differences. 1. From things which generate plenty of Choler; and they are either External, as sweet things, hot meats and drinks; poysons, as the Gall of a Leopard, biting of Vipers and venomous things; Or Internal, as a hot and dry distemper of the Liver; Or an Inflammation and Apostematation of the same. 2. From things hindering the purifying of the blood, separation and expulsion of Choler, as a compression of the bladder of the Gall by a scirrhus of the Liver, or other Tumor: Or obstruction of the said Bladder by thick Flegm, plenty of Choler, Stones or the like; if it be by default of the Liver, then the right Hypochondry is distended, which if it becomes hard, it foretells a Dropsy. 3. From things which suddenly thrust forth Choler from the center to the circumference: this is chiefly in Feavers, in which it is cast forth critically,

and then the preceeding Disease is cured, Or symptomatically, by reason of its plenty and acrimony, and then it is cast out just before the Crisis or seventh day.

XI. Obstructio Lienis, obstruction of the Spleen, it proceedeth from the same causes that they of the Liver do; There is swelling, pain, heaviness and beating on the left side under the Ribs; blackness of the Tongue, Thirst, loathing of Meat, Fever, painful lying on either Side, chiefly on the right.

Or thus, It is an obstruction of the Vessels in the Spleen, by reason of thick humors. The part affected is either the Spleen in its whole substance; Or in its Veins or Arteries. At the beginning there is a heaviness in the left Hypochondry with pain of the Spleen; from whence a humor mixt with Blood being diffused into the habit of the whole Body, dyes it of a livid color, and makes a difficulty of breathing after Exercise: if that humor mixt with blood be cast into the Stomach, it causeth loathing and vomiting: if into the Guts, it either causes a Diarrhæa from its quantity, or a costiveness of Body, from its quality. The said humor is thick and earthy, made from gross meats, which by reason of the weakness of the Spleen, causeth stoppages, Or by reason of a hot and dry distemper of the Spleen, wherein, because of too great strength of the Attractive Faculty, the Chyle is drawn unconcocted: sometimes this humor is generated from an unnatural suppression of the Courses, or stoppage of an accustomed Flux of the Hemorrhoids.

XII. Choleric Passio, is a Disease that violently sends forth sharp cholerick Humors, both by Vomit and Stool, through a violent irritation of the expulsive Faculty: thence is Windiness, Thirst, Gnawing of the Stomach and Guts, Loathing, Pulse small and unequal, Sweating, with Convulsion and coldness of the extrem Parts, Swooning, Pain at Heart, and the like: it is generally caused either by Poyson, violent Medicines, Surfeits, or evil Diet, or bred elsewhere and sent to the Stomach.

The differences. 1. From the matter irritating, being contained in the Stomach, and then there is loathing, straightness, and a gnawing pain of the Stomach. 2. From the matter flowing from other parts, as from the Liver, Pancreas, Guts or Mesentery into the Stomach, and then for the most part there is present a Malign Fever and a Convulsion. 3. From the quality of the matter, moist or dry. Moist Cholera produces an exquisite Choleric Passio, of which all that we have spoken is to be understood. Dry Cholera produces a Spurious or Bastard, wherein there is a vomiting of a flatulent spirit through the upper and lower parts, and a pushing up of the Belly, with noise, and a pain of the Loyns and Sides: and this is caused either from the fiery heat of the Stomach, corrupting the Food, and turning it into sharp Vapours: Or from sharp and windy Nourishment, as Radishes, Onions, Rocket seed, Fryed Eggs, &c. Or from black Cholera, and other acrid and salt Humors, lurking about the hypocondries, and rarified by heat

eat and mixture of other humors : This is seen in Sales and saline Spirits, which being mixed with acid Spirits, produce such a great quantity of windy matter, as may be seen by the pulvis fulminans made of Sale of Tarter, Niter and Sulphur.

XIII. Melancholia Hypochondriaca, Hypochondriack Melancholy, is caused either from meats of melancholick Juyce, Sadness, Crudities, or much Study, Idleness, Watching, or stoppage of the Terms or Hemorrhoids : there is Rawness, Windyness, sharp Belchings, Burning and Pain of the Stomach and Sides, which are plucked upwards, and sometimes inflamed, the Belly is Bound, little Sleep, troublesome Dreams, with an universal melancholy Disposition.

Ætius and Diocles call this affect the Windy Passion, and it obtains the name of Melancholy, when the Brain is affected by consent. It is a collection of the filthy and vitious humors, in the branches of the Vena Porta, Cæliacal and Mesenteriacal Arteries, by reason of a fault of the concoction of the Spleen without putrefaction, thence sending many Vapours, causing eminent symptoms. 'Tis called Hypochondriacal, because it possesses the place of both Hypochondries, viz. That part of the Body, which under the last Ribbs, reaches as far as the Loins, on both sides, comprehending with the Muscles the Bowels themselves. The Signs. 1. Crudity of the Stomach, so sour sometimes, as that it sets the Teeth on edge. 2. Pains in the Stomach, reaching even to the back

and returning upon eating. 3. Constiveness of Body, from an Universal melancholy Habit. 4. An Inflammation of the Hypochondries, attended with redness of the Cheeks and whole Face. 5. Urine sometimes thin, and sometimes thick and troubled, with sometimes a sediment of red Sand. 6. A motion of Wind in the left Hypochondry causing a great pain. 7. Anxiety, caused by Wind, distending the Hypochondries, thereby causing a straightness in those parts which have Nerves from the sixth conjugation. 8. A Palpitation of the Heart, either from the malignity of the Vapours in the part, or by consent of the Stomach. 9. A Beating on the left Hypochondry, caused either by the Cæliacal Branch, after Anger and violent motion : Or by the compression of the Arteries in the Mesentery by the Glandules. 10. A dryness in the Mouth, Tongue and Pallet, by reason of hot Vapours, ascending through the Gullet and rough Artery. 11. Difficulty of Breathing, both by reason of the affection of the Nerves, dedicated to the Muscles of the Breast ; and of the affusion of evil matter into the spaces of the Muscles. 12. A perturbation of the Brain from vapours resolved, which if they be obscure, they darken the Spirits, and cause Melancholy dotages ; if dry, an Epilepsy and Watching ; and if many, the Vertigo, and sometimes a fear of strangling or stupidity. The Cause is evil humors obstructed, chiefly Melancholy and Wind, caused by Concoction of the Spleen, hura

or fault of the Glandules, collected in the branches of the Vena Porta, the Cœliacal and Mesenteriacal Arteries, chiefly the greater, going along by the left Hypochondry. The differences. 1. It is Essential, to which all that we have spoken is to be applied. 2. By consent of other parts; as of the Stomach, known by often spitting and sour belchings, a taste of rust in the Mouth, desire of cold drink, and strong pains in the Stomach, even to the back: Of the Liver, known by a pain of the right Hypochondry, loathing of meat, and a slow erratic Feaver: Of the Womb, known by symptoms of the Mother: Of the Hemorrhoidal Veins, known by an unnatural suppression of the Hemorrhoids.

XIV. *calculus Renum*, Stone in the Reins, is known by pains about the Loyns, sometimes sharp; Urine sometimes Bloody, thin and little in quantity, voiding of red Sand and little Stones; the Thigh on the same side the Stone is, sometimes is pained and as it were benumbed.

The Stone is made of a mucilaginous, slimy, tartarous Matter, endued with a petrescitive Spirit, residing in the Reins. The principal Signs are. 1. Pain which affects the Loyns, and causes a sense of heaviness: tis distinguished from the Cholick, because it is not so grievous, and is fixt to the Region of the Kidnies. 2. Bloody Urine, by reason of the wounding of the parts through which it passes. 3. A Numbness of the Thighs, (which happens not in the Cholick) because the Muscle on which the Kidnies lye which is

appointed for the bending of the Thigh, and is inserted into the inner part of the Thigh is compressed. 4. A retraction of the Testicle of that side; by reason of the retraction of the neighbouring Vessels, which lead to the Stones, and are inserted in them. 5. A nauseausness and Vomiting, by reason the Kidnies are knit to the Stomach, by the mediation of the Peritonæum, and two Nerves of the sixth conjugation, issuing from the Stomach, are inserted into the internal coat of the Kidnies.

XV. *calculus Vesicæ*, Stone in the Bladder, is known by Pain in the neck of the Bladder, reaching to the Glans, especially after pissing; the Yard sometimes itcheth, and he feels a great weight about the neck of the Bladder (when the Stone is grown great:) the Urine sometimes suddainly stoppeth, with most vehement Pains, it is most easy to piss lying on the back, because the Stone falleth out of the neck of the Bladder; there is sometimes white Gravel sent forth.

There is not only pain in the Neck of the Bladder, but in the Pubes and Perinæum, which by progression and distention of the Bladder, torments with exceeding great Anguish, the sick making water by Drops, with vehement pain: the water while the Stone is generating is thin and clear, and of somewhat a whitish colour: but being already concreted, tis wont to settle like to Oyl, with a gravelly sediment, white, and (if the Stone be brittle) like to Scabs. The differences. 1. One

is generating, in which Gravel comes forth with the Urine: Another concrete, in which no Gravel comes forth. 2. One is concreted in the Bladder; another descends from the Reins through the Ureters into it, and then Signs of the Stone in the Reins went before. 3. One sticks to the substance of the Bladder; another is loose and cleaves not to it. 4. One is small in which a wandering tickling afflicts about the Pubes and perinæum: Another is a great Stone, in which the weight of some heavy thing is felt; they piss often, the Urine can hardly be kept in, is white, thick; turbid, with a purulent sediment, like to snivel of the Nose; in pissing the Stone often falls in the way and stops the Water, from whence sharp pains come towards the end of pissing; and the Stone as if coming forth, does strongly compress the Sphincter Muscle; sometimes it affects the whole passage of the Privities, and sometimes the Glans or Nut. Striving to piss is accosted with desire of going to stool, because the magnitude of the Stone from the Perinæum stimulates the right Gut, as well as the Neck of the Bladder.

XVI. Diabetes, is an unmeasurable pissing, causing a great Thirst, and whatsoever is drunk, to be even pissed out as it is taken; 'tis caused by a strong attractive faculty of the Reins, and weakness of the retentive Faculty: there is unquenchable Thirst, much Pissing, heat in the Bowels, Leanness and Consumption of the Body.

The part affected is the Kidnies; but the Bladder oppressed with too

much Urine consents also. The Cause is supposed to be from Cholera and salt Flegm, sticking in the substance of the Kidnies, thereby irritating the attractive Faculty, as also the too great largeness of the Emulgent Vessels and Ureters, heat of the Liver and Pestilential Feaver. The differences. 1. One is Exquisite, which is that of which we have spoken. 2. Another Bastard, which is only a Colliquative Flux of Urine, by the change of the natural Juices into Serum.

XVII. Dysuria, Urinæ Difficultas, Difficulty of Pissing, is evident enough of it self, it is caused either from the Stone, inflammation and Heat, a Gonorrhœa, or mixture of Humors, known by their proper Signs.

Or thus. A Dysuria is a making of burning or scalding Urine, whether little or much with pain but without stoppage. The Causes are whatsoever can dissolve the continuity or unity of the Neck of the Bladder, or Urinary passage, or otherwise cause pain in pissing. The Differences are, 1. From things External, as Cantharides, Poyson, &c. From Causes Internal, as sharpness or acrimony of Urine: Inflammation of the Neck of the Bladder or Urinary passages: A Stone striking against the Neck of the Bladder in making water: A white and milky matter, sent forth in so great abundance, that when settled it fills one half of a Chamber pot: Lastly, A Gonorrhœa, or seed by sticking in the passages made acrimonious and corroding the Vessels which is common in the French-Pox.

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XVIII. Stran-

XVIII. *Stranguria, Stillicidium Urinae*, making Urine by Drops, is known by the relation thereof: it is caused either from sharpness of Urine, Exulceration of of the Bladder, or sharp Humors flowing from the Liver or Reins.

A Strangury may be either with or without pain, but there is a continual desire to piss, from a continual irritation of the expulsive Faculty of the Bladder, either from an affection of the Sphincter Muscle, or weakness of the retentive Faculty.

The Differences are two fold.

1. One is with Pain from the irritation of the expulsive Faculty. This is either from sharpness of Urine, caused by hot, sharp, salt unnatural Diet, or sharp humors sent to the Bladder, with the Urine, known by this, that the Urine is red or yellowish, a pricking is felt with a heat and thirst: Or by matter sent from the Liver, Reins, or elsewhere: Or from the Stone, which excoriates the Bladder: Or from an Inflammation: Or from Distemper of the adjacent parts, as falling down of the Womb, Inflammation of the womb, purulency of the Kidnies, Inflammation of the intestinum rectum, in all which cases the Urine comes by drops, with pricking pain. 2. Another which is without pain, known by a white watery Urine, cold Diet, and in a person of a cold, moist and stegmatick complexion; it is caused from a too great refrigeration of the Bladder, and its sphincter Muscle.

XIX. *Iscuria, suppressio Urinae*, total stoppage of Urine, is caused either by reason of a Stone or of gross Humors, or clotted Blood, or Inflammation, or Hard-

ness, or Swelling against Nature, or hurt of the Nerve, which is related to the expulsive Faculty of the Bladder, any of which may easily be discerned, of a discreet man by his own industry and their proper Signs.

It is caused through fault of the expulsive Faculty. The Differences are taken, 1. From the part: One is from straightness of the Urinary passages, known because the Urine is not voided by compressing the Bladder, nor is the Catheter easily put up: Another from Diseases of the Bladder, which is known by a distention of the Pubes, continual desire to piss, and pain from much Urine, which by putting up a Catheter, flows forth in great plenty, and with ease: those Diseases are chiefly. 1. A stupidity. 2. A cold Distemper, from cooling causes. 3. Straightness, either by reason of a Stone, or of some Tumor of the Muscle compassing the Neck. 4. Too great Extention from too long retaining the Urine in the Bladder. 2. From the Effence. one is Exquisite, of which, what is before spoken is to be understood. Another Spurious, wherein the bladder is empty, for a Catheter being put up, no water will flow forth, nor is there any heaviness, distention or pain about the Pubes, though you press it. It is caused either from the fault of the attractive or expulsive Faculty of the Kidnies: or defect of Serum not being generated, or converted some other way, or obstruction of the Ureters.

XX. *Gonorrhœa*, The Running of the Reins, is an involuntary and continual Flux of Seed, through weak-

weakness of the Retentive Faculty, in the Spermatick Vessels: the matter is watery, thin, and without pleasure or feeling. They that have this Disease, their whole body by little and little corrupteth and waxeth lean and feeble: and especially about the Loyns there is much weakness; which comes not from the quantity that issueth forth, but from the Principality of the Parts.

A Gonorrhæa is twofold: 1. Simple, which is a continual and involuntary flux of Seed, and is that of which we have already spoken. 2. Virulent, wherein there is a Flux of purulent matter, from a solution of unity in the Urinary and Seminal passages, which by length of time and continuance corrupts and putrifies the seed: if it proceeds from a venomous cause, there is a malignant Ulcer, either in the Urethra, or parts adjacent, which commonly begins at the Glans, and from thence subtilly conveys it self down along the Urethra, till it contaminates the neighbouring Vessels and parts. The matter flowing forth is sometimes whitish, sometimes reddish, yellowish, greenish, blewish, sometimes thick, sometimes thin, sometimes with great pain, and sometime with little or none, stinking and poisonous, which by contagion infects other Bodies: there is a great soreness at the first with exceeding heat and scalding of Urine. There is collected oftentimes an Aposteme within, sometimes about the Stones in the Epydidymis, sometimes in the Perinæum, the skin of which breaking pours forth the matter.

XXI. *Mensum suppressio*, the Stoppage of the Flowers against Nature is sufficiently known from the Patients Relation, being caused either from Obstruction through Cold, or meats of gross and clammy juyce, or the evacuation of it another way, or Consumption of the Parts.

Or thus. It is a retention of the Menstruous Blood, because of the straightness of the passages, or fault of the Blood: In Virgins it is known from the wandering of the stopt Blood, up and down the veins, with Obstructions, change of the colour of the Face and Skin, with sometimes a Fever: In women it is carried to the Womb, and creates Diseases there: It is distinguished from their suppression, in a woman with Child, because they

1. Retain the native colour of the Body.
2. Every day find the Symptoms more mild.
3. Find the motion of the Child in the third Month.
4. Have the mouth of the Womb shut up and hard.

The Differences. 1. One is from the straightness of the passages; and this is caused, either from Obstruction of the Veins of the Womb, by cold and thick Blood, mixt with tough and viscus Humors: Or from Compression, which is either from external causes, as North Wind, staying in cold Water, &c. Or internal Causes. as fatness of the Womb, or Tumor of the adjacent parts: Or from a constipation, the substance of the Womb it self being hard, which is either Native, or afterwards created by a cold and dry Distemper: Or from a growing together, caused either by a scar after an Ulcer; or by floss of a mem-

brane, growing over the Vessels of the Womb, or after many Abortions.

2. From a defect of Blood. Wherein it either is not generated by reason of want of Food, too much evacuation, Issues, Fistula's, cold distempers of the principal parts, old Age, Feavers, &c. Or is converted to other uses, as in women with Child, fat people, and such as give suck: Or is wasted by too much exercise, sadness, sighs, great sweats, great evacuations, much sweating: Or by dryness of the Blood, which is caused by adustion:

XXII. Mensium Profluvium the immoderate flowing of the Terms, is as apparent also as the former; being caused either through weakness of the Retentive Faculty, by immoderate Purgations, hard Travel in Child-birth, Abortion, or breaking of the Vessels; or else from the great abundance of them, and from a plethorick Constitution of Body.

The too plentiful or more continued flux of the Terms, than is convenient, arises either from fault of the Blood, of the Womb, or of the Veins; if the Flux be continued very long, there follows want of Appetite, crudity, evil colour of the Face, swellings of the Feet and other parts of the Body, as Cachexy, Consumption, &c. The differences: 1. From the derivation of the Blood, which is either from the bottom of the Womb, and then it is black and commonly clotted; Or from the Neck of the Womb, and then it is more ruddy and fluid. 2. From the quantity of Blood, being too plentiful, which through its weight or Acrimony, or both, either opens the vessels or breaks them, this

is chiefly in such as have had them stopt along time: 3. From the quality of the Blood, which is either sharp, and then there is a corrosion of the Vessels with Signs either of Choler, then Blood corrupted in the Womb, slides forth in greater quantity: Or else serous and watery, wherein there is either fault in the digestive Faculty of the Liver, or attractive Faculty of the Reins, in that they draw not the Serum enough; in this case, the Blood does not easily clot. 4. From the fault of the Veins, which is either by Anostomosis, Diapedesis, or Diæresis, Or lastly, by corrosion, which arises either from sharp and corrupt Blood, or sharp Medicines. See an Hæmorrhage.

XXIII. Suffocatio Uteri, Fits of the Mother, are caused either from the feed, Menstrua, Melancholy or Wind, preternaturally retained and corrupted. In the Fit, the Breath almost goes away, the Body waxes cold, Speech is lost, Pulse weak, and they lye as for Dead: sometimes there is Vomiting, Ravings, Swoonings and Choaking; through the compression of the Diaphragma, Lungs, and Muscles of Respiration, wherein the Sick are as though they were strangled; and withall the Womb seems to rise up, and the Breast and Belly to swell; in the decrease of the Fit, they begin to move, open their Eyes and sigh.

Some Authors define it to be a heap of Symptoms, opposing the Actions either Natural, Animal, or Vital, by periods proceeding from a malignant Vapour, raised from the Womb. In some persons

Mad-

Madness of the Womb is present, with prating and fury, and sometimes other kinds of madness: sometimes it is with sleep and drowsiness, and then the sick falls as one astonished, without motion or sense, and lyes as it were dead. In the declining of the Fit, a certain humour flows out of the privities, the Guts make a noise, then the Eyes are lift up, the Cheeks grow red, sense and motion returning: but these Signs happen not to all; some have continual laughing, and talk pleasant things, and some talk foolishly; some frame the barking of Dogs, hissing of Serpents, clucking of Cocks or Hens. It differs from the Falling-sickness, because here the Convulsive motions are more Universal, nor do they remember any thing out of the Fit, which hapned to them in the Fit; From an Apoplexy, because in this the Fit is suddain without any notice, they snore in breathing, nor do they feel being prickt. From a Syncope, because herein there are no presages of the coming Fit, but a failure of the pulse, cold sweats, and as sudden going off, whereas in Hysterical Fits, the passion lasts sometimes a day or two. The Cause is a malignant Vapour, spirituous, and in a moment peircing the whole Body, raised from a peculiar corrupted matter in the Womb, which is excited, either by it self, or things external, as Fears, Anger, Discontent, or sweet Smells. The differences are from the Causes. 1. From corrupt feed, sending forth Vapours, in these the Courses flow as they ought, all the symptoms are more vehement, and in the declining of the Fit, an humor like seed flows

forth at the privities. 2. From stoppage of the Courses, and the menstrual Blood corrupted; here the Symptoms are more gentle. 3. From Viscous humors and Wind, arising from Distemper of the Womb.

XXIV. Inflammation of the Guts.

It is a hot Tumor of them, proceeding from Blood extravasated, and in the Guts corrupting and putrefying. There is a fixt and distending pain, accompanied with costiveness of Body, stoppage of Urine and a Fever: the cause of the Blood flowing thither, is imputed to its thinness, being from the cold of the Season driven into the center of the Body. The differences are taken from the Causes and place. 1. It is either of it self, of which we have now treated; Or from a Rupture of the Navel: Or from a Rupture of the Peritonæum, Or from a contusion. 2. Tis either of the small Guts, which is most usual, wherein there is a distention of the Stomach, straightness of Breathing, and daily Vomiting, so that the sick cannot contain their drink: Or of the great Guts; in which the pain reaches more to the Hypochondries, with a heaviness of the Loyns, but the vomiting is not so continual.

XXV. Straightness of the Guts.

It is a narrowness of their Cavities, or passages of the Ordure, known chiefly by this, that the excrements of the Bowells, are not duly cast forth by Stool. The Differences: 1. One is from things taken in, drying and astringent. 2. Another from excrements, hardness obstructing the passage, which is known from there being no Tumor,

or pain, the excrements being retained. 3. Another from Inflammation of the Guts, before spoken of. 4. Another from the growing together of the Gut. 5. Another from a Rupture or Worms. 6. Lastly, Another from much thick Flegm, arising from fault of the Dyet, and causes generating Flegm, Crudities, slowness of the Bowels to stool, Wind, and Feeble heat of the Bowels; where if the flegm sticks long, it grows so thick, that it wholly stops up the Guts.

XXVI. Κήλη Ῥήξις *Ramex, Ruptura*, A Rupture of the Guts, is a falling down of the Guts out of their proper places; known by a Tumor which sometimes increases, and sometimes decreases, according to the quantity of the Gut fallen down, as it is filled with Wind or Excrements: it is not commonly painful, unless the sick be much oppressed with Wind, or move himself much: if he be laid down on his back, the Guts will slip back into the Belly, and that with a Grumbling: the Cause is what soever can break or relax the process derived from the Peritonæum. The differences. 1. One is a Rupture of the Peritonæum, wherein the Tumor is suddenly raised and increased, the Gut falling down to the very bottom; it is generally caused from blows, falls, violent exercise, over-straining, straining to expel the Child or Excrements, holding the breath, straining of the voice, wounds of the Peritonæum, &c. 2. Another is from a relaxation of the Peritonæum, known from the Tumor growing by little and little, and the Gut not descending to the bottom. The cause

is from the humid property of the Peritonæum; or from such things as may in time break it, whence Ruptures often ensue, especially to Children. 3. That which falls into the Groin, is called Oskeocele: if into the Groin, Bubonocèle; this much distends the skin, and stretches out under it, causing a great Tumor, and both these are either Εγτεροκήλη, Enterocèle, when the Gut Ileon falls down; Or Επιπλοκήλη, Epiplocele, when some part of the Caul. 4. To these may be added Exomphalos, Or Omphalocèle, a Rupture, or Relaxation of the Navel, which struts forth sometimes the bigness of a Nut, sometimes of an Apple, and sometimes is raised like a Bag.

XXVII. Falling down of the Fundament. It is a falling or hanging forth of the exterior part of the Intestinum Rectum, which is known by sight: The Differences arise from the Causes: 1. From great straining either in forcing out Excrements, or in expelling the Child. 2. From a great irritation of the part, occasioned either by a dysentery or Tenesmus, Or weakness of the Muscles which draw up the Fundament being thrust forth, Or from the often falling down of the Fundament; Or from cold. 3. From a Resolution, either by reason of the confusion of the Nerves about the Region of the Os sacrum or Rump bone; Or from some great Refrigeration of them, whence comes a Relaxation of the Sphincter Muscle; Or from some Apocisme or Fistula, arising about the Sphincter Muscles.

XXVIII. Costiveness of Body. It is a binding up of the Bowels, through

through hardness of the Excrements, wherein little or nothing is cast forth, in respect of what is received in, or not without great trouble and straining. The Differences are two-fold: 1. From the Excrements. *And they are either wanting by reason of Fasting; Or they do not prick and stimulate by reason of their small quantity, or want of a sufficient mixtion of Choler which is conveyed to other parts; Or they are hard, either by fasting, and a hot habit of Body, or long retention, by which they grow dry, the Veins of the Mesentery attracting part of their juyce; Or by gross tough, and binding food, not sufficiently moistned in eating.* 2. From the Guts, which is either when they do not feel by long being accustomed to be bound; Or their stupidity caused by Carus, Coma, Letbargy, Palsy or Apoplexy; Or by reason of Flegm adhering to their Coats, as in the Cholick. Or else when the Guts do not cast forth, by reason of the narrowness of the passages, of which see, Sect. 2. 5. *aforegoing; Or from some swelling of the Mesentery pressing them; or fault of the Muscles of the Belly; Or too great strength of the Retentive Faculty, and weakness of the Expulsive.*

XXIX. Cæliaca, The Cæliack passion. It is a swift and speedy, passing of the Food and Drink out of the Stomach into the Guts, before it is sufficiently concocted, whereby it is cast forth like to Chyle or a milky Substance. This expulsion is generally performed in about 6 or 8 hours after eating; where although the purest and most subtil part of the Nutriment, is altered, concocted, digested, and pas-

sed over into the Nourishment of the Body; yet the Body has not a sufficient quantity thereof, by reason of which, it consumes and pines away. Before excretion, the Belly is extended and struts, and in going to stool, there is some light taintings: the Pulse is frequent, and heat molests, as if there were a Fever. The Cause is either from, 1. The fault or ill distribution of the Chyle, occasioned from Obstructions either of the Mesentery, Liver or Spleen, wherein the Chyle is excreted white. 2. From a debility of the attractive Faculty of the Liver, wherein the Chyle is stained with a little reddish color. 3. From the too great quantity of putrefactive Nutriment, and much drinking; whence in time much Corruption is bred, which being encreased either in quantity or quality, excites the expulsive Faculty against Nature.

XXX. Inflammation or Tumor of the Intestinum Rectum. It comes either from force, or violent Medicines; or extream Costiveness of the Body: It is known by the exceeding sharpness of the pain, continually fixed in one and the same place; moreover there is a kind of Tenesmus or vain desire of going to Stool; in which, by reason of the magnitude or greatness of the Tumor obstructing, little or nothing is voided: *The External Cause may be either food of a very binding quality, and of an excessive hot and dry property: Or from cold received up the Fundament, in sitting long at Stool, &c.*

XXXI. Verucæ Ani, Warts of the Anus. They are of four kinds, viz. 1. *Condylomata*, hard

and callous, bunching out, or swelling of the skin of the *Anus*; not extraordinary painful, arising from a melancholy juice.

2. *Thymi*, Rough Warts, having a narrow basis and a large superficies, easily sending forth Blood from the same. 3. *Ficus*, The Fig, which is the former degenerated, or very much increased almost into the form of a Fig; if they bleed, they are of bad signification, but worse if they should prove cancerous. 4. *Crista*, Excrescences of Flesh, arising from preposterous Venery.

XXXII. *Rhagades*, Clefts, or oblong Ulcers of the *Anus*. They are without a swelling, and are either superficial or deep, without any Calous, or with a Calous, moist and yielding filth, or dry and Cancerous. They are caused either, 1. From the over hardness of the Excrements, which in passing break the skin. 2. From a dry Distemper, joyned with sharp and corrosive humors, and sometimes Malignant. 3. From a kind of flux, of sharp corroding humors, which are clammy, by reason of which they stick to the part, afflicting the Patient with an itching, with very sharp pain and burning.

XXXIII. *Fistula in Ano*, *Fistula* in the Fundament. This Disease commonly occurs upon Inflammations or Tumors, and Ulcers of the *Anus* not well cured. They are discovered by the narrowness of their Orifices or Mouths, having a large cavity within, from whence is voided sometimes a thin and watery, and sometimes a virulent, ill coloured, and ill scented matter.

The Differences are two fold. 1. They are such as do not penetrate, either into the *Intestinum Rectum*, or into the Bladder, which is known by putting in a Probe. 2. Or such as do penetrate either to the said *Intestinum Rectum*, where the Excrements are voided through them, and liquor injected comes out through the Gut: Or to the Bladder, and then the water is made through the *Fistula*: Or to both Gut and Bladder, and then Wind is expelled, as well from the Secrets as the *Anus*. If the *Fistula* be in the *Sphincter Muscle*, the Excrements of the Belly issue forth of their own accord.

XXXIV. *Hepatick Flux*, A Flux of the Liver; It is either Exquisite or Spurious. 1. In the Exquisite, that which is voided looks thinly red, as the water wherein the flesh of a Beast newly killed, has been washed; it clods not together, and flows frequently, yet not so often as in a dysentery; there is no gnawing pain, but only a heavy pain; the Eye-lids and feet swell; and the Excrements are Crude and Raw. It is caused from a weakness and defect of natural heat in the Liver; and other causes, which dissipate or waste it, or obstruct and Choke up some of its passages. 2. In the Spurious, the Blood is either sharp and corrosive, by the mixture of Choler with it; or thick by its long continuance, in the Liver or some other part; Or saculent and foul, from the foulness of the Liver, by reason that the Spleen attracts not its usual Dregs.

XXXV. *Obstruction of the Mesentery*. It is a stoppage or glew-

glewing up the vessels of the Mesentery, and is two fold. 1. *When the milky veins are obstructed,* wherein a chylous and white Flux of the Belly afflicts the sick, with a Consumption of the Body, by reason it is deprived of its nourishment, which because of the Obstruction, cannot be sent to its respective parts: It is caused from a Crude, Thick, Clammy, Viscous Chyle; or from a Tumor of the Glandules, compressing those Veins. 2. *When the Meseraick Veins are obstructed:* and then the matter restrained cause a sense of distention and weight, a troublesome beating of the Arteries of the Back; and after eating the Stomach is compressed, and the Disease grows worse. It is caused either from sharp Vapours and fuliginous Wind; Or from sharp Humors, wherein the pain is more vehement, and the Disease seems to possess (in breathing) the Cavity of the whole Brest, so that there seems to be a danger of Suffocation: Or from a Tumor raised about the mouth of the Stomach, with many Belchings, and a suppression of those things which should be voided by the lower parts.

XXXVI. *Inflammation of the Mesentery.* It is a Tumor thereof, arising from humors cast forth with the pure Blood into its spaces or emptiness; or deeply impacted in its Glandules, and putrified by the help of External heat. It is known by a soft or slow Fever, pain in the Loyns, sometimes in the right, and sometimes on both sides, extending it self to the forepart of

the Belly, about and above the Stomach; the Body is costive, the Excrements chylous, after which follows a thin matter, sometimes alone and yellowish, and sometimes mixt with the Excrements. The Cause why the Blood and Humors are cast forth in those empty spaces, is because the way for them to the Guts is stoppt, either by astringents given unskillfully in a Bloody Flux; Or by the superabundancy of thick, clammy humors, hastily falling to the Gut. It differs from the pains of the Stomach, Matrix, Colon, and Reines, by almost all the expressed Signs: From the fatness of the Belly, because it cleaving to the hide, may be separated from the Muscles of the Abdomen, and taken up in the hand: from a Tumor of the Muscles of the Abdomen, because it being prest causeth pain.

XXXVII. *Apoftemes of the Mesentery.* They are caused either through many Scirrhus tumors; or from Stones which are found in the Mesentery, or from infinite Apoftemations, without sense and pain included in their proper Cistis, and containing a Gypseous, Glutinous, or liquid Matter; But these things are difficultly known, and sometimes not till after Death; yet if the Belly be swelled, and so signs of a Dropsy, or some other Disease near akin to it, be present, an Apofteme of the Mesentery is to be feared. The filth of these Apoftemes is sometimes voided in prodigious quantity, of its own accord by stool; and sometimes it circulates and turns again: sometimes it is plentifully cast forth between the Peritonaeum and Mus-

Muscles of the Abdomen; and then either falls into the Cavity of the Abdomen, by breaking the Peritonæum, Or breaks outwardly by an Aposteme.

XXXVIII. Pain of the Mesentery. It is dolorous, arising from a hot and sharp matter, cast into the Membranes of the Mesentery, afflicting by a perpetual pain of the Belly and Loyns, and sometimes by consent the Head and whole Body, and this especially in or near Autumn. *There is a strong, suppression of wind and excrements, violent pain of the Belly and Loyns, Vomiting, and little benefit by Clysters; pains increase, so that all hopes of recovery is cast off: pain in the Reins increases; the adjacent Muscles of the Belly and the Peritonæum are filled with putrefaction, and an Universal pain possesses the whole Belly, and passes even to the uttermost Joints, more especially to those of the Shoulders and Feet, causing the sick to have at last Convulsive motions. The Cause is putrid and malign Humors, inimical to the Stomach, Liver, and Bowels, which not being cast forth by stool, are thrust into the Mesentery (which is only the Peritonæum doubled and fastened to the Loyns.)*

XXXIX. Inflammation of the Liver. It is a hot Tumor, arising from Blood impacted and putrefied, in the substance of the Liver, which is either attracted or transmitted, or flows thither, either through fault of its quality, as thinness, heat, Acrimony: Or of its quantity; or by force of external Causes; wherein the sick is afflicted with 1. A Fever,

whose greatness is according to the greatness of the Inflammation, being exasperated mostly at night. 2. A heavy weight and pain in the right Hypochondry, from the Membranes, with which the Liver is joyned to the Bastard Ribs. 3. A Tumor in the same, which shews it self greater, the sick lying on their left side; but lesser if on the right. 4. A dry Cough, which by intervals afflicts the Midriff by compression, from vapours raised up to the Lungs. 5. A swift and unequal Pulse, from the necessity of Cooling. 6. A pain reaching from the Throat to the Bastard Ribs, from the heap of matter restrained, which presses or pulls the Membranes that cover the Breast. 7. A difficulty of breathing, from the Magnitude of the Tumor. *The Differences.* 1. One is either great, wherein the Symptoms are the more violent: Or small, wherein the Liver is filled with small Apostemes like felons, but with little or no Tumor, or pain in the Hypochondry, nor is the Fever very burning. 2. It is either in the Gibbous part, wherein there is difficulty of breathing, Cough and heavy pain in the Throat; lying on the right side, is more difficult, with a Tumor easily perceived being conspicuous to the Eyes: Or in the hollow part, wherein loathing of Meat, Thirst, Hiccough, Cholerick Vomittings, or Stools, are more vehement, and lying down on the left side, more painful; nor is the Tumor so easily discerned by the touch. 3. It is either Exquisite from pure blood, wherein all the Symptoms, are more gentle

le; Or Spurious, wherein the blood is mixt with either Choler, and then there is a burning Fever, vomiting of pure Choler, or ejecting it by Stool, causing a Diarrhea or Dysenteria: Or mixt with Flegm; which is not usual.

XL. *Scirrhus of the Liver*. It is a hard Tumor thereof without pain, arising from a thick matter impacted, and hardened in the substance of the Liver. 'Tis known by a Tumor in the left Hypochondry; which may be discovered by touching, if the Belly be thin and not Fat, and is easier observed the Patient standing upright or bowing to the left side: there is also a dull kind of Pain, because the adjacent parts endowed with Sense, are compressed by the Tumor. This swelling grows not suddainly, but by little and little, first stopping up the small Veins of the Liver, which being increased, afflicts the whole substance thereof, distending the Liver into a very great Bulk, so that it appears swelled, where the thin humor being dissipated by heat, all the remaining part grows hard. The differences. 1. From the State. It is either in beginning, being Spurious, joyned with pain and is curable: Or confirmed and exquisite, without pain, incurable, and causing a Dropsy. 2. From the Humor. And that is either from Choller, following a Jaundice, with a gentle Fever: Or from Flegm, lasting long without any trouble, there being present a Cachexy and universal Dropsy: Or from Melancholy, which is known by the Signs of a melancholy Habit.

3. From the place. It is either in the Gibbous part, or the hollow part, the which you may discern by Sect. 39. as foregoing.

XLII. *Ulcers of the Liver*. It is a corruption and putrefaction of the same, through some corrosive humor or juyce. It is known by a sharp pain in the right Hypochondry, Cough, yellowness of the Face and skin, voiding of filthy purulent and sanious Excrements, both by Urine and Stool, together with an Universal *Atrophia*, because the sick is not nourished, nor is there any Blood generated. The differences: 1. One is in the superficies of the Liver: Another in the substance. 2. One is in the Gibbous part, known by difficulty of Breathing, pain of the Midriff, and purulent Urine, without any sign of Exulceration in the Reins and Bladder: Another in the hollow part, known by pricking and heaviness about the Liver; pain of the Guts from the sharpness of the humor, and purulent stools. 3. One following an Inflammation, which ended in an *Apostemation*: Another from a sharp and corrosive humor, which creeps on by degrees, the strength not being sensibly impaired; there is loathing of Food, and at length a Fever arises, which generally ends in a *Hectick*; caused from fault of corrupt, putrifying, and acid Nutrimment, or Medicines.

XLII. *Atonia, Weakness, of the Liver*. It is a hurt of the Faculties, by reason of a hot or cold Distemper thereof, wherein the Chyle is either not elaborated in the Stomach; or if well concocted, some vitious matter

is mixt with it : It is known by the colour of the Body, and Excrements of the Belly and Urine. *The differences arise from the hurt of the Faculties.* 1. From the hurt of the blood making faculty; which is either by a cold Distemper, and then the Excrements of the Bowels, are like the washings of meat newly killed, which the cold increasing does cease : Or from a hot distemper, wherein the Chyle seems as if it were burnt, and the Excrements art like the Dregs of Blood. 2. From the hurt of the Attractive Faculty; wherein although there be no obstruction of the Mesentery, or fault of the Stomach, a kind of Chylous matter flows by stool like to cream. 3. From the hurt of the retentive Faculty, wherein the the stools are like the washing of Flesh new killed, yet seldom moist and purulent.

XLIII. *The Dropsy Ascites.* It is a stretching of the Belly, by reason of the super-abounding of serous, watery and salt humor, cast forth into the capacity of the Abdomen, through fault of the Liver, Spleen and Reins, causing also the Foot, Thigh, and sometimes the Codsto swell. It is known by a difficulty of breathing, from abundance of water lying on the Midriff; a swelling of the Belly, which begins from the lower parts, with a slenderness of the upper part; the Belly being struck there is a hoarse sound heard as from a Bladder half full. Sometimes there is a cough, either from the compression of the Midriff; or from the piercing of the water into the Breast, from whence

suffocation quickly ensues: moreover if the Fingers be imprest in the flesh, chiefly in the Legs, it leaves a manifest mark or sign of the Impression, like a pit, and the Sick turning from side to side a noise like the murmuring or waving of water is heard. The Cause is a serous and watery humor obstructed; (for they that piss much after great drinking never are troubled with a Dropsy) the water is collected from too much drinking, and a moist Diet, eating moist Fruits, and too much of broth, and the like liquid food, and then through a fault of the Bowels, the water is either attracted or contained in the Belly, where staying it is poured forth at length into its Cavity. The place where the Humor is first collected is between the Stomach and Kidnies, through which the Serum ought naturally to be emptied, especially in the Splenetick Vein, the Meseraick, and the branches of the Splenetick Artery, and the Roots of those Veins about the hollow parts of the Gastrical and Epiploical Bowels. It is cast forth into the capacity of the Belly, or that space which is between the Peritonæum, the Caul, and the Guts, chiefly by the Epiploick and Gastro-Epiploick Branches; the Humor, by continuance of time putrifies, whence comes corruption of the Bowels, a Fever and Thirst, from salt vapours assailing the mouth of the Stomach. The differences are drawn from the default of the part causing. 1. From fault of the Kidnies, wherein they are obstructed by some thick, slimy, viscous and pituitous matter, or the Stone, whereby the expulsive

faculty is hurt; Or hurt of the Attractive Faculty, through some Ulcer, whereby the Serum is not drawn; Or because the Ureters are broken, (through the Violence of Expelling the Stone) and then the Dropsy arises immediately, and as it were at once.

2. From fault of the Spleen, which being as it were spongy, ought to draw the Serum from the Stomach, by the Vas breve, that Office being appointed to it by Nature, from whence it may be carried by the Splenetick Artery into the Celiacal and Trunk of the Aorta, and from thence by the emulgent Arteries to the Veins. 3. From fault of the Liver, from the aforesaid causes, of either not attracting the Serum; or retaining of it by reason of obstruction of the passages, caused by a thick and viscid matter; Or a too greedy and hasty attraction, where more is drawn than can be expelled in the same time, which is caused by reason of some inflammation of the Liver, and then there is Motion to Cough, Excrements few and dry, and as it were burnt up by the heat of the Liver, because the Watery humour is sent into the Belly.

XLIV. The Dropsy Tympanites. It is a distention or stretching of the Abdomen, by reason of much Wind, (for the most part joyned with Water) contained within its Capacity: The Skin seems stretcht like the Skin of a Drum, and being struck upon gives a Sound much like that of a Drum, the Navel hangs out: the Swelling of the Belly is commonly greater than in other Dropsies; but the heaviness thereof is less; compressing of it, it does not leave so apparent an Impression behind it as in the other kinds,

but the hallowness is presently filled up, and expulsion of Wind both upwards and downwards is very frequent, with a Noise and Rumbling. The Cause is chiefly Wind proceeding either from a feeble heat, or a burning heat, which resolves a subtle matter into Vapors; this resolution is not in the Stomach, for then it would be cast out by Belching, nor in the Guts, for, then it would be expelled by stool: but for the most part between the Coats of the Mesentery and Guts; for the sick is most afflicted with pain about the Navel and Loyns, and that is by reason the Mesentery is joyned forwards to the small Guts, and backwards to the Vertebrae of the Loyns, from which it springs, and from this the distention grows: But it is also found to insinuate it self into the Guts, through the Orifices of the Meseraick Veins.

XLV. Ὁ πρὸς ἀρχὴν ὁ ὕδαρ, λευκοπλεγματίας, Anasarca, An Universal Dropsy of the whole Body. It is an equal preternatural Watery Tumour throughout the whole Body, arising from default of Nourishment. It is known by the increase of the Magnitude of the whole humane frame, much greater than in a Cachexy; the Feet and Legs swell at first, there is a softness of the Skin and Flesh, looseness of the Flesh, paleness of the Face, weakness and faintness upon the least labour, a slow but continual Fever, Urine thin, white, and raw, with a frequent unequal and small Pulse. The Cause proceeds from fault of the Nutrient not assimilated but flegmatick and crude, from a cold habit of the Liver and Veins, which

habit spreads it self through the whole Body with a viscous, coagulated Water.

XLVI. *Inflammation of the Spleen.* It is a Tumor or Swelling thereof, coming of Blood cast forth into its Substance, which is sometimes in a part thereof only, sometimes in the whole. 'Tis known by a Swelling in the right Hypochondry, sticking out as it were towards the foreparts, and girding the middle, by which it is distinguished from a pain in the left Kidney, which is higher than that in the Right; there is a continual Fever observing the time of a Quartan; difficulty of Breathing from the Compression of the Midriff, with a pulsation or palpitation of that Side, because of the Arteries with which it abounds. The cause is Blood, as aforesaid, either pure, or mixt with Choler, Flegm, or Melancholy, which is to be discerned by their proper signs. The Differences are. 1. From the place, possessing only a part; Or the whole Spleen, and then the Tumor is not only much greater, but the Symptoms also more vehement. 2. From the Cause. One is Exquisite, which proceeds from sincere Blood: Another mixt wherein the Blood is mixt with some of the other humors.

XLVII. *Scirrhus of the Spleen.* It is a hard tumor, arising from a thick Viscous matter, whose Watery part is exhausted. It resists the Touch, and is generally without Pain, there is an oblong hardness on the left side, difficulty of Breathing; Dryness of the Mouth, faint and troublesome Sweats, swelling of the

Feet, and uneasy lying on the left side. The matter causing the Disease comes either from meats of a gross and thick juce; Or too much Labour and Watching, which consumes the thinner part of the humours; Or, being thin are hardened either by force of heat, Or Medicines too much discussive: Or from a tartarous Spirit, leading to induration. The Spleen being thus oppressed that it is not able to perform its Duty of Sanguification, a Consumption follows, and a Livid colour of the Skin, from a Melancholy humour being diffused through the whole body by the Blood. The differences are two fold. 1. One Recent, which causes pain even to the very Throat: Or inveterate which is Void of all pain. 2. One affects the Spleen only, according to its Substance. Another seizes also some other of the adjacent parts, and sometimes comprehends all the left side of the Abdomen.

XLVIII. *Pain of the Spleen.* It is from Solution of its Unity, and stretching of its Membrane: it is caused both by things External, as Blows, Falls, &c. and Internal, as Inflammation, Inflation, Tumors, Ulcers, &c. It ought to be distinguished. 1. From those pains of the left Side which are felt after either Eating or Riding, proceeding either from Wind or Watery humours, which flowing into the spaces of the Peritoneum, sticking close to the Coats there do separate them from the Muscles. 2. From the pains of the Muscles, which are felt if they be a little prest.

XLIX. *The Black Jaundice.* It is a diffusion of Corrupt Choler

or Melancholy from the Spleen through the habit of the whole Body, causing a change of the colour of the Skin into Black: The cause is the same here as in the Yellow-Jaundice, except that in the Yellow the Liver is in fault, here the Spleen. 'Tis known by the Colour of the Skin, and a heavy Lumpish and Melancholy disposition of Body, wherein the Sick by degrees pines and wafts away, as if in a deep Consumption; *It arises either from a Yellow Jaundice degenerating, wherein the Choler is corrupted or burnt, and there went a yellowness of the skin and Eyes before: Or from great Sweats, a long and great obstruction of the Spleen going before: wherein the Atra bilis, by reason of much sweating is spread over the habit of the Body and skin by the Blood.*

L. Obstruction of the Reins. It is a straitness or Compression of the Vessels of the Kidneys. It is known by stoppage of Urine, or making it in small quantity, distention and heaviness about the Loyns, either in one or both sides. The cause is from matter making the Obstruction. *The Differences.* 1. One is from the Stone, of which in its place. 2. Another from much Gravel generated in the Substance of the Kidneys, which through the violence of the Urine running, is carried to the hollow parts, and afterwards, thrust down to the Bladder. 3. Another from clotted Blood, fallen out of its Vessels and coagulated, known by pissing of Blood going before, falls, blows, bruises, &c. 4. Another from matter, wherein an Aposteme

went before, and there is signs of an Ulcer, and sometimes purulent Urine. 5. Another from too much dryness which contracts the Substance or Tumor, Phlegmon, Scirrhus, compressing them, all known by their Signs. 6. Another from Viscous clammy humours, known by want of pain, heaviness of the part, Obstruction of Urine and a Fever.

LI. Nephritis, An Inflammation of the Reins. It is a Phlegmonous Tumor from Blood, thrust into their Substance, and there corrupting, joyned with strong pains, and voiding of fibrous or gravelly matter; a continual inordinate Fever, sometimes increasing, sometimes abating, but growing stronger about Night; subversion of the Bowels and Stomach; Vomiting, first of flegmatick matter, then of chollerick, a stupidity and numbness of the next thigh, by reason of the Compression of the Nerve; A scarceness, thinness, and watriness of the Urine when the Disease begins; sometimes a suppression, and then presently plenty and thickness of Urine, with a desire of pissing, from a provocation of heat; Mitigation of pain by lying down on the sick side, exasperation on the contrary, with a difficult raising up of the Body being laid: the pain if very violent, returns often, and pulls the Peritonæum; *The Cause is Blood either sincere, or mixt with other humours and collected into the Kidneys, Or, cast thither by way of Fluxion, either from the whole body or apart.* The Differences.

1. One is in the Right Kidney, then there is a Numbness on the right Thigh, the pain is on the right side and ascends to the Liver. One on the left, in which the pain descends to the Bladder. One in both, in which all the Symptoms agree. 2. One is in the fleshy part, in which a greater heaviness is felt; Another in the parts in which the Arteries terminate, in which the pain is with pulsation, or seems to beat.

LII. *Ulcers of the Reins:* It is a Solution of Continuity corrupted, caused (seldom by the Apostemation of a Phlegmon, but) by a Stone restrained within the Kidney, which either bruises the Kidney by its weight, or by fretting upon it does corrode it: then the Urine is first bloody, after purulent; and sometimes a gentle Fever afflicts, sometimes none. *If it be by the Apisteme of a Phlegmon breaking, that Apisteme must come by a fall or Blow, which breaking the Veins, causes a bloody Tumor, which being putrified, and by the help of an acrimonious juice flowing thither, corrodes the Kidnies, and so cause an Ulcer.*

LIII. *Inflammation of the Bladder.* It is Tumor possessing the Sphincter Muscle of the Neck of the Bladder: known by a bitter pain in the Perinaum, with redness and heat; suppression of Urine, with a great endeavour to piss; costiveness of Body (because the Intestinum Rectum is straightened by a Tumor or Inflammation) with a distention of the Pubes and Pecten to the Navel, from abundance of water.

The Cause is Blood either pure or mixt with some humor: The differences arise, 1. From the Cause, wherein the blood is cast in by fluxion; Or attracted and drawn thither by irritating the part, which may be done either by a Stone sticking there, or Flux of humors stopping up the passages; Or, from an extraordinary long retention of the urine. 2. From the part, where it is either in the Sphincter Muscle, or in the space beyond it, viz. in the substance of the Bladder, which is thin, and as it were Bloodless.

LIV. *Ulcer of the Bladder.* It is a Solution of continuity, in that part corrupted: known by scales and matter which issues forth only with the Urine, and sinks down in it; whereby it is distinguished from an Ulcer of the Urinary passages, in which the matter and filth either goes before the Urine, Or appears immediately at first coming forth; Or flows forth with the Urine: In an Ulcer of the Bladder, there is a continual Torment about the Bladder, pubes and perinaum: the Urine is thick, mixt sometimes with matter, and sometimes with Blood. The differences arise 1. From the Cause: One is from Cantharides; Another from sharp Urine, caused by drinking much Wine, and eating hot meats; Another from Salt and Acid Humors, corroding the internal superficies: Another from the Stone; of which in its place. 2. From the place: One is in the bottom of the Bladder, in which the pain is felt about the Pubes: Another by the Urinary passage, in which the

the pain is felt about the Pubes; Another by the Urinary passage in which at time of pissing the pain is most felt, especially at beginning and making an end of pissing.

LV. Incontinency of Urine. It is an involuntary pissing, or pissing without sense of desire, by reason of the Resolution of the Sphincter Muscle, or compression of the Bladder, which comes either through a Convulsion of the Muscle of the Belly; Or from the greatness of the Birth in the last months; Or from a Tumor upon the Bladder. The Differences. 1. From the causes, causing a resolution of the Sphincter: One is from the Palsy of the Nerves, which from the Loyns are incerted, into it, by reason of which it cannot contract it self. Another from the looseness and softness of the Sphincter; and then the sick can neither bear the sharpness, nor great quantity of Urine, when the Animal powers are asleep. 2. From the time. One is Diurnal, which is common to such as are troubled with the Palsy and Apoplexy. Another Nocturnal, which mostly befalls Children, by reason of their not thinking of it; Or of a cold and moist Distemper of the Muscle.

LVl. Pissing Blood. It is a passing away of Blood with the Urine, being mixed therewith in the Bladder. The Urine is not perspicuous, but has the color of water, in which the flesh of Beasts new killed is Washt. The differences. 1. One is from the Kidnies, either by Anatomiasis, Diæresis, or Diapedesis, and then the Blood is exquisitely mixed

with the whole Urine, that being as it were diluted with it, it will be thin, ruddy liquid, and settle without clotting together. 2. Another is from the Liver, either weakened or oppress'd with Blood, or affected, as the Reins aforesaid. 3. Another from suppression of the Hemorrhoids, Or a Wound of the Ureters, from Stones passing through them; from which but little blood flows. 3. From the Sphincter Muscle of the neck of the Bladder, and then the urine is not wholly imbued therewith, but the Blood settling goes into clots; there is pain in pissing, burning as it were the root of the Yard, and other Signs either of an ulcer, or of a vein broken are present.

LVII. Pissing of Matter. Is is the voiding of purulency or filth (gathered together in the Bladder) with the Urine. The collection of it in the Bladder, is either by default of the Bladder it self, from an Ulcer, Or Blood contained in it, turned to corruption: 2. Or by default of the Ureters, and then a little matter swims on the top like hairs. 3. Or by default of the Urinary passages, Spermatick Vessels, and the Parastata, in which the matter comes in the first place pure. 4. By default of the Stomach, Liver, and Reins, those parts transmitting matter through the Veins to the Bladder; and then it is exactly mixed with the Urine.

LVIII. Pneumatocèle. It is a Windy Rupture, or Tumor of the Cod, arising from Wind collected there. The Cod, and sometimes the Stones are very much distended, but without a weight

weight and heaviness; the Wind is felt in the Cod, if it be prest with the Hands, and it removes from place to place with a noise: It is caused from Wind, either collected there, Or transmitted from the adjacent Bowels and Belly, being most familiar to Children. *The primary cause may be long crying, or striving, or a fall or the fault of the Nurses Milk, or things that breed Wind and Gripes, or unnatural Food, lying in the Cold Air, by which the Belly becomes tumified, from whence emptying it self it descends into the Cods.*

LIX. Hydrocele, Hernia aquosa. A watery Rupture or Tumor of the Cods, arising from Water. The Cod being moved, there is perceived a waving, and the Cod looks as it were shining; the swelling always continues of the same bigness, nor does it go up into the Belly, by pressing of it. It generally proceeds from water, which for the most part flows thither from the Belly, for those causes which we have specified in the Dropsy. *The Differences. One is only from water distending the Cod: another from water and wind together: another from the flesh also growing to the Testicle. 2. One is with a Dropsie, another without a Dropsie. The swelling either possesses the whole Cod, or only one side; and the water sticks in the Erythroidal membrane that contains the Testicle; the right stone never swells, always the left. 3. One is by fault of the left kidney, through which when the Serum cannot descend, it falls through the seminal vein, proceeding from the Emulgent of the left Kidney into the Erythroi-*

dal coat. 4. One is when the water is contained between the Erythroidal coat, and the Darton, in which the Tumor is rounder like an Egg, the stone is hidden from the sight & swelling, the Cod it self is whiter, and little distended or nothing: Or when it is out of that between it and the adjacent skins, in which the stone is to be felt, and the Scrotum is more distended. 5. Another is when it is in its proper skin or Coat growing over it, wherein the swelling is every where globical, and resembling the form of another stone.

LX. Sarcocoele, Hernia carnosæ, A fleshy Rupture. It is a fleshy Tumor of the Cods, known by a hard swelling increased by little and little, afflicting without any swelling in the Groin, by which it is distinguish'd from a Rupture of the Guts. It is for the most part in the right stone, because nature does most easily cast out the blood to it by the Seminal Vein coming from the Vena Cava. It arises from corrupted blood flowing to the Testicles and Cod, which by degrees dropping from the membranes of the Vessels, is changed by nature into a substance like to flesh. *The differences. 1. Tis exquisite, of which all that we have spoken is intended. 2. Or Spurious; called Circocoele, varicosus, in which the vessels nourishing the Stone are dilated like to varices; In this the Veins are swelled, wreathed and rounded, like to shoots of Vines, the swelling is oblique, and in form of a Grape, and Spring and Autumn, the intestines being tumified with Wind, or the feet cooled, a pain accompanies it; the cause is from a gross, viscous*

melancholy humor cast forth into the Vessells.

LXI. Diseases of the Yard.

The Principal Diseases afflicting the Yard are Excrescencies and Ulcers. 1. An Excrescency is two fold, viz. either Warts or Carnosities. Warts generally happen to the Glans, and are of a Spungy Substance, they bunch out upon the flesh of the Glans, and under the Preputium or foreskin; they are Soft, Spungy, always Moist, and Smell ill, being Familiar to them that are troubled with the Pox; or have lain with a foul Woman. Carnosities, although they happen sometimes without the Glans, yet they most commonly chance within the Urethra, or passage of Urine and Seed, they are a troublesome spungy kind of flesh, causing pain and in some Measure stopping of the Urine, arising from a Malign and contagious Cause, being commonly a Symptom of the Pox. 2. An Ulcer, which is Venereal. Some are External and apparent to the sight, yet sometimes when the Preputium or foreskin is much swelled, they cannot be seen. Some are internal in the Urethra, or Urinary passage, known by pain in Pissing, matter Running, Swelling and distention of the Yard: they are caused either from an Apoplexy following an Inflammation: Or from sharp Urine: Or rough Stones or things hurting the passage, Or Venom of the Pox: Or things Externally put in. Some penetrate so that both the External and Internal parts are exulcerated, and the Ulcer pierces

even to the Urinary passage: Some are old, sordid, purrified and rotten. Lastly, Others are Virulent, as those that happen in the French Pox.

LXII. Impotency. It is well known what it is, and therefore needs no Definition, nor Signs, yet it is, when that by no Endeavours the Yard can be extended. The differences arise from the Causes. 1. From defect of Seed, either because it is not generated, Or but little, or crude and indigested, whereby it does not stimulate. 2. From defect of the Vital Spirits, which is either from their paucity, because of the cold and dry disposition of the beare: Or from their deviating another way, as in Meditations, Care, Fear, Anger, Baseness; Or because the Substance of Yard (either from Stupidity or Enchantments,) is not able to receive them. 3. From the Resolution of the Yard from those causes which produce a Palsy.

LXIII. Priapismus, a Priapism is an Erection or Extension of the yard without Lust, or desire of Venery caused by a Windy Spirit filling the Hollow Nerve of the Part: this Spirit is contained in the Nerve it self from a cold Distemper thereof, Obstructing its passage: Or in the Yard and Vessels from a crude, thick and Viscous humour (so made by an undue heat) stopping its recourse. But for the most part it is by reason that the Mouths of the Arteries are too open and dilated, and pour forth too great a plenty of Spirits, from the over great heat of the Loyns and Kid-

weight and heaviness; the Wind is felt in the Cod, if it be preſt with the Hands, and it removes from place to place with a noiſe: It is cauſed from Wind, either collected there, Or tranſmitted from the adjacent Bowels and Belly, being moſt familiar to Children. *The primary cauſe may be long crying, or ſtriving, or a fall or the fault of the Nurſes Milk, or things that breed Wind and Gripes, or unnatural Food, lying in the Cold Air, by which the Belly becomes tumified, from whence emptying it ſelf it deſcends into the Cods.*

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dal coat. 4. One is when the water is contained between the Erythroidal coat, and the Darton, in which the Tumor is rounder like an Egg, the ſtone is hidden from the ſight & ſwelling, the Cod it ſelf is whiter, and little diſtended or nothing: Or when it is out of that between it and the adjacent ſkins, in which the ſtone is to be felt, and the Scrotum is more diſtended. 5. Another is when it is in its proper ſkin or Coat growing over it, wherein the ſwelling is every where globical, and reſembling the form of another ſtone.

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melancholy humor cast forth into the Vessels.

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even to the Urinary passage: Some are old, sordid, putrified and rotten. Lastly, Others are Virulent, as those that happen in the French *Pox*.

LXII. Impotency. It is well known what it is, and therefore needs no Definition, nor Signs, yet it is, when that by no Endeavours the Yard can be extended. The differences arise from the Causes. 1. From defect of Seed, either because it is not generated, Or but little, or crude and indigested, whereby it does not stimulate. 2. From defect of the Vital Spirits, which is either from their paucity, because of the cold and dry disposition of the heart: Or from their deviating another way, as in Meditations, Care, Fear, Anger, Baseness; Or because the Substance of Yard (either from Stupidity or Enchantments,) is not able to receive them. 3. From the Resolution of the Yard from those causes which produce a Palsy.

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nies, which are also repleat with a great plenty of spirits, this mostly befalls such as abound with much blood.

LXIV. Tentigo; It is the growing of the *Clitoris* into too great a bulk. The part affected is the *Clitoris*, or that Nervous flesh, which is hard, which in the Neck of the Womb the joynt Wings of the Privities do embrace, and the top of which swells in desires of Venery: Sometimes the Magnitude is so large, that it hangs forth at the Cleft of the *Vulva*, as thick as a Goose Neck, resembling a mans Yard: and there is strong desires to Copulation: The cause proceeds from too great plenty and afflux of some humour, which is induced thither by too often touching of the part, which through Custom stirs up Lust at the least Motion.

LXV. Straitness of the Neck of the Womb. It is a stopping of the same, or of the Orifice of the Womb, either by a Compression, or a growing together. There is a stoppage of the Courses in them in whom they are wont to flow through the Neck, with a sense of pain or waight. The Cause is either Natural from the Birth, Or Accidental from New matter. The Differences.

1. From the part: One is of the outward Orifice, or *Pudendum*, in which the Courses which flow by the Neck and the Womb are stoppt, so that there can neither be Conception nor Copulation; because neither Seed nor Fard is received: Another of the Inward Orifice, or Orifice of the Womb, in which the Seed received flows forth again im-

mediately. 2. From the Cause. One is by Compression; which is caused either by a fat Caul lying on the Mouth of the Womb; Or by a too great Widening of the Thighs; Or by a stone in the Bladder: Or by a Tumor in the Intestinum Rectum. Another by the growing of the Orifice together, which is either the Orifice of the *Pudendum*, or of the Womb, and those either from the Birth, and then either flesh stops it, which is red to sight and soft to touch: Or a Membrane which is white to sight, and hard to touch: Or after birth, chiefly from an Ulcer, and then either the Sides of the Neck are grown together; Or there is a Calous Substance filling the place.

LXVI. Pustles of the Womb. They are little Bunchings out, arising in the Neck of the Womb, which by their Acrimonious humour do cause Itching, and some little Pain, following the Itching; there is a falling down of Scales like Flower; But that you may the better discern the affect, you must use a *Speculum Matricis*. The Cause is from Cholerick, Corrosive, adust, thick and Viscous humors, which being emptied into Moist and Loose places, do insinuate themselves in them. The Differences. They are, 1. Benign, and without evil Symptoms. 2. Or Malign from the Pox.

LXVII. Condylomata, They are Swellings of the Wrinkles in the Neck of the Womb, with heat and pain: They are evident to the Sight: if there be many of them they resemble a small bunch of Grapes; the Wrinkles hang

hang forth like Knobs, which appear in the Fist doubled, but swelling more at the flowing of the Terms. They are Caused from Viscous and adust humors proceeding from a Melancholy habit. The Differences. 1. It is either with Inflammation, in which the heat and pain is greater, and the Condyloma hard. 2. Or it is without an Inflammation, wherein the accidents and Symptoms are all milder.

LXVIII. Hemorrhoids of the Womb. They are little Tumors, (much like to the Hemorrhoids of the Anus) which arise in the Neck of the Womb by an afflux of Filthy, Corrupt, Dreggy, and Melancholy Blood. The part affected is the Neck of the Womb, where the Veins do end, (as in Piles of the Anus) and are puffed up by an afflux of the Blood: the Woman looks pale, and is Weary, although without any Labour; they are discerned by Sight, through the help of a Speculum Matricis. The Cause is thick, dreggy Blood, flowing to those Veins not at its due time, where stopping, it becomes so thick that it cannot penetrate the Orifices of the said Veins. The Differences. 1. Some are painful, by which pain they are distinguished from the Courses: Others without pain. 2. Some are Open which flow either moderately, or immoderately, wherein the strength is dejected, and danger of a Cachexia ensues. Others are Blind, by which no Blood at all comes forth.

LXIX. Ulcers of the Neck of the Womb. They are a Soluti-

on of Continuity in that part Corrupted, known by a pain, and continual pricking in the same place, which by little and little is increased, specially if any cleansing thing be injected; A Sanious and purulent humor flows forth by Intervals, and that sometimes with Blood if either the Ulcer be great, or the Courses flow. If the Bladder be drawn into Consent, the Sick Pisses often, and as it were Scalding and with Pain: there is a pain in the forepart of the Head, extending it self to the root of the Eyes, with a small Fever Concomitant. The Causes are all things both External and Internal whatsoever, that can by their sharpness, corrode or Dissolve the Unity of the part. The Differences. 1. Some are gentle and benign, with little matter, thick, and not stinking: Others are sordid and malign, having a plenty of matter flowing forth with pain. 2. Some are from External causes as evil Medicines, hard Labor, forcible Coition: Others from Internal, as the Afterbirth retained and corrupted, flux of blood retained, flux of the Womb, Virulent Gonorrhœa, French Pox, humours flowing there either from the whole, or a part, or generated there. 3. Some are superficial yielding little matter: Others profound, with much filth and stinking. 4. Some are small long Ulcers eating the Skin of the Neck of the Womb, called Rhagades of the Womb; known by Pain and Blood in the time of Coition, they may be known by sight, through the help of a Speculum Matricis, being

like to Clits or Chops in the hands in Winter time: they are caused either from painful Labour, or Violent Coition; Or else from an Inflammation, Condyomata, or an afflux of sharp humors: Others leave behind them a Fistula, which is void of Pain, unless it be near a nervous part: sometimes it goes to the Bladder, and Intestinum Rectum; then the Excrements are cast forth through it.

LXX. Distemper of the Womb: It is a declining of the Womb from its Natural Temper, to a Preternatural Distemper from Causes, either External, or Internal, or both. *The Differences.* It is either Simple or Compound. The Simple is either Hot, Cold, Moist, or Dry. 1. *Hot Distemper of the Womb,* is known by a great desire to Coition, by the Paucity, Yellowness, Blackness, Adustion and Acrimony of the Terms, and by their difficult and inordinate flowing, causing in length of time the Patient to be Hypochondriacal, by the Early growing of Hair in the Privities, redness of the Face, dryness of the Lips, often pains of the Head, and much Choler in the Body: It is either Native, whence are Virago's and such as are Barren: Or acquired from things External, as the use of hot things and Medicines, too much Venery. 2. *Cold Distemper of the Womb;* this is more common than the former, and is known by a less desire to Venery, or little Pleasure in it; by the stopping, Viscousness, and Slimy-ness of the Terms, and their inordinate Flux, from Humours

gathered together in the Womb, and causing Obstruction; much Wind, Crudity and Watrishness of the Seed, which causes it to flow without Pleasure, as also a Paleness or Whiteness of the Face. 3. *Moist Distemper of the Womb;* It is generally joyned with a Cold one, and is known by plenty, thinness and watrishness of the Couries; Moisture of the Privities, from some humidity or Flux of the Womb; in Coition they have little Pleasure, and after Conception when the Child grows big, they are apt to Miscarry, this generally befalling them that lead an Idle and Sedentary Life. 4. *Dry Distemper of the Womb* is known by the Paucity of the Seed and Courses, indisposition or slowness to Coition, and dryness of the Mouth of the Womb; the colour of the lower Lip is a blackish red, with Continual clefts in it. It is either Native, by which the Patient hath a natural dry habit, and slender Constitution of Body; Or acquired in elder years wherein they cease to breed Children; and that either from some Disease as an Inflammation, &c. Or from a defect of Blood, not being conveyed to the part. *A Compound Distemper* comes from the mixture of some of the former four, and is 1. Hot and Dry. 2. Hot and Moist. 3. Cold and Dry. 4. Cold and Moist; all which are to be known from the former Signs compared together.

LXXI. Obstruction of the Womb. It is a straightness of the Vessels

Vessels of the Womb, Or an Interception of the Humid and humors, from causes External, Internal, or both; it is known by a retention of the Courses and an hinderance of Conception, from the falling down of Blood intercepted. The Differences. 1. One is from External Causes, as astringent Medicines and astringent Baths: Another Internal from some Internal Cause, of which in the second difference: Another Complicate from a Conjunction of the two former causes. 2. One is from Obstruction, caused from a Plenitude of thick Viscous humors, flowing thither either from the rest of the body, Or heaped up in the Womb from the Weakness of its heat: it is known by the present Signs, of a cold Distemper, and a moisture like Serum sometimes coming from the Womb: Another from Compression, caused either by an Inflammation, or Scirrhus, either within or without the Womb, and then the Signs of a Tumor are present: Another from a Scar, flesh or Membrane growing on the Vessels: Or from a gnawing together of the Mouth of the Veins, after a violent drawing out of the Secundine.

LXXII. Inflammation of the Womb. It is a Windy Tumor, or a distention of the Womb through Wind, from a cold, flegmatick, and flatulent matter rarified. Some call it a Windy Mola, because it seems almost like Conception: It is known by a distention or stretching of the Womb, consisting in the Region of the Belly, which sometimes increases, sometimes diminishes;

sometimes extending it self to the Sides, sometimes to the Navel, sometimes to the Loyns and Midriff. It is distinguished from a Mola, by want of heaviness and hardness in the Belly, with a weight, moving it self from side to side as the sick moves. From a Conception by the Sound, by the Increase and decrease of the Tumor, and by wanting of Motion, like the moving of the Infant. From an Inflammation of the Guts, because here there are neither Pains nor Costiveness of the Body, but the Terms are stopt, the Feet swell, as also the hollow of the Eyes; the Colour is changed, and when she wakes out of her Sleep, she Breaths with her Neck Upright. From a Dropsy by its lesser Bulk, want of Thirst, by the increase and decrease of the Swelling, and by a less waiting of the Upper parts. And from a Dropsy of the Womb, by the foregoing causes generating Wind, by a Noise; less heaviness, greater distention, and by feeling a Vehement pricking pain in the adjacent parts. The matter causing is either generated in the Womb, by a stoppage of the Terms, or suppression of the Purgation after delivery: Or it proceeds from other parts, either by the Veins or by the Seminal Vessels. The differences. 1. One is when the Ventosity is in the Cavity, and then the Mouth of the Womb is so stopt, that not any of it can get out: and then when either the Woman is moved, or her Belly prest with the hand, a Sound and Noise is discerned. That Wind may be

Contained in the Cavity is certain, because the Womb (though it be thick) may be distended, as in Conception; and it may be retained there, as in a Mola. 2. Another is when it is in the Tunicles or Coats of the same, and then the Mouth of the Womb may be stoppt, because the Wind is contained in a narrower place; the Sound goes forth, and the pains are both greater and extended farther,

LXXIII. *Inflammation of the Womb.* It is a Tumor thereof, arising from Dis temper or putrefaction of Blood, cast into its substance, sometimes turning to a Scirrhus, sometimes to an Aposteme. There is a swelling of the Womb, with heat and pain, shutting up thereof, drawing of it towards the interior parts, the whole Neck looks ruddy, little veins swelling every where, like to a Spiders Web; difficulty of breathing retention of the Ordure and Urine; sometimes the Belly is filled with water, sometimes it appears empty, the Navel struts forth, and the Courses of a sudden break down, few and of an evil colour; a continual burning Fever, sometimes a Lypirias, pain of the Breast, with Inflation of them, from consent of the Groyns, Hips, Diaphragma, cancell Bones, and forepart of the Head, arising from vapors of putrified Blood, carried up to the Head, by the Arteries, running through the Neck, from both parts of the Infundibulum, into the said forepart of the Head. The Cause is Blood, either sincere, or mixt with Atrabili, or Choler, falling thither, either

from the detaining of it, in the time of the Monthly purgation; Or after a delivery, from the accurse of cold Air: 'Tis drawn thither either by Heat or Pain, which is caused either by Miscarriage, hard Labour, violent drawing forth of the Secundine, long Walking, the Terms being at hand, or a troublesome carrying of the child in the Womb, being either great or ill posited. The Differences. 1. One is of the whole Womb, in which the aforesaid Symptoms do almost all of them really afflict: Another of the contrary side, wherein the Inflammation goes to the Hip, by reason of the Ligaments of the Womb which are carried thither, the leg of the same side is difficultly moved, and the groin thereof is inflamed. 2. One is of the hinder part, wherein the Belly is bound, and the pain afflicts the Loins and Back bone: Another of the forepart, wherein because it coherres to the Bladder, the Urine is stoppt or made with difficulty, with a pain towards the Pubes: Another in the bottom, wherein the lower part of the Belly is in such pain, that it can scarcely be touched, the pain extending towards the Navel. 3. One which degenerates into a Scirrhus, in which all the Symptoms are milder, a Weight is felt in the Adjacent parts, the Disease proves Chronic and often ends in a Dropsy of the Womb. Another which becomes an Aposteme, wherein all the Symptoms are increased, till it is suppurated, horror generally invades the Sick in the Evening: The Aposteme being broken the Urine sometimes and sometimes the Belly is stoppt, with

tumour of the Pubes, and sence of something Waving:

LXXIV. Scirrhus of the Womb.

It is a hard Tumour thereof without pain, and resisting the Touch, proceeding from a thick earthy, feculent and Melancholy humor. At the beginning of it there is a Stoppage of the Terms, or they flow but little; it increasing, there is a great Flux by Intervals, with an exceeding hardness of the part. 'Tis known from a Mola, because in that the Breasts swell with Milk, which in a Scirrhus are extenuated; and in a Mola the Courle (if they flow) do flow irregularly. The Cause is a thick feculent Blood, mixt sometimes with Flegm, sometimes with Melancholy, happening mostly in an elderly Age, and to such as have had a Pica or Bullimus: Or an Inflammation ill cured by the too much use either of Coolers or Discussives. The Differences. 1. One is in the Substance of the Womb, which causes a pain in the Hip and Back. 2. Another in the Neck, which may be discovered by the touch of the Fingers: if it is in the upper part of the Neck she feels pain in Coition, and the bladder is prest by the Swelling; if in the lower part, the Intestinum Rectum is afflicted.

LXXV. Cancer of the Womb.

It is a hard Tumor of the Body or Neck of the Womb which resists the Touch, and causeth a most Vehement pain, pricking and cutting as it were the part; you may know it by sight through the help of a Speculum Matricis, the Tumor being uneven and bunching, of a Black or

Livid Color, encompassed with several branches of Veins, as it were with roots; if it be Ulcerated it casts forth a Bloody Watery matter, yellowish or blackish and stinking; and sometimes Blood it self by Corroding the Veins which pass through that part, and that to so excessive a quantity sometimes, as may endanger the Patients life; there is also a small Fever, unquietness, illness at Stomach, and heat about the Privities. It is caused of Attribilis or Melancholy heaped up in that part, or from a Scirrhus ill cured, which then easily degenerates into Cancer, more especially in this part from the abundant affluxes of blood, which these Veins (near the Scirrhus) retaining it becomes adust and acquires a malignant Quality. The Differences. They are two fold. 1. Not Ulcerate, wherein the Morbifick matter is less Corrosive and Malign. 2. Ulcerate, when the acrimony of the said matter is augmented through putrefaction or adustion.

LXXVI. Ulcer of the Womb.

It is a solution of continuity putrified following an Apostem of the Womb. There is pain and pricking in the Womb, Voiding of Pus or Quittor, pain about the Share, and the Excrements flow out more abundantly: if the Ulcer peirces to the outward Surface, the Patients Urine, or Stools seems Matterish, or a fluctuation is pierced in the Paunch, or Swelling toward the Groins: if the Ulcer is Simple and Benign the matter is little, white, and not stinking; but if corrosive and Malignant, the matter will be

be greenish livid, and party-colored, coming away with pain and stink. If it comes from a *Pox* or *Gonorrhœa*, other Symptoms will be found to attend it. The Causes are either External as Child bearing, violent and insupportable Coition, Wounds, Falls, Bruises, a Virulent *Gonorrhœa*, the *Pox*, sharp and corrosive Medicines injected into the Womb, or taken at Mouth, *Cantharides*, &c. Or Internal, as a long flux of sharp and corrosive humors flowing into the Womb; Or an *Apostem* breaking. The Differences. 1. From the Place: One is in the Neck of the Womb, of which before at Sect. 69. Another in the inner Orifice, or bottom of the Womb, of which here. One (which is most frequent) in the Inner surface of the Womb; Another (which is seldom) in the outward surface thereof, whence it comes to pass that then the matter comes out by the Bladder or Guts; Or if it settles into the Capacity of the Belly, *Apostems* arise about the Groines. 2. From the Quantity. Some are great and grievous, as it were devouring; called by *Hippocrates*, *Nomæ*, that is eating Ulcers: Others are small, differing little from the Scab and Itch. 3. From their Form; wherein they are either round, or long, or hollow, or fistulous. 4. From their Complication, wherein they are *Phlegmonous*, *Scirrhus*, *Cancerous*, or *Poc'y*.

LXXVII. Dropsy of the Womb.

It is a debility thereof, from much water heaped up in it, either by its own fault, or consent of other parts. It is known by the paucity and evil colour of

the Courses, being like the washings of flesh, and they fail before their time; there is a thinness, and moisture of the mouth of the Womb, loose Swelling of the lower part of the Belly, softness of the Breasts, want of Milk, a Rigor, and many times a Feaver. 'Tis differenced from an Inflammation, by its Softness, want of a Feaver, &c. From an Inflation by defect of distention and noise. From a Mola because here the Breasts swell not, nor is there so great a weight in the bottom of the Belly. From a Conception, because in a Conception the Womb is pointed, here it is extended according to the largeness of the Womb and Belly; where Conception is, the Courses do not usually flow; here a certain evil and bloody humidity comes forth without any order. From a Dropsy of the Abdomen, by want of thirst, ascent of the tumor from the lower part to the upper, and the Color in the Face. The Cause is Water, which is either by fault of the Liver or Spleen (which see in their proper places:) Or Weakness of the Womb, wherein it neither digests well, nor expulses its excrements, caused either by manifold miscarriages or difficult delivery: Or from the Courses, by reason either of too great a flux of them, or their suppression. The Differences. 1. One is when the Water is shut up in the Cavity of the Womb, wherein the Mouth of the Womb, if touched, will be found closed. 2. Another is when the water is lodged in its substance, and little Vessicles or Bladders growing to it, wherein the Orifice

is contracted, and the pains are greater.

LXXVIII. Falling down of the Womb. It is a hanging forth of the same out of the Belly, caused by a relaxation or solution of Unity of its Ligaments: there is at the beginning pain in the Loyns, lower part of the Belly, Privities, and *Os Sacrum* to which the Womb is fastned: at length the pain is eased, and there is only a sense of waight, hindering walking; and the part hanging down, is as it were a skin stretched, much like a goose Egg, just without the Privities.

The Differences. 1. From the relaxnels of the Ligaments, which are in number four; then it comes by degrees, and the pain is less; being caused either of hard labor, afflux of stegmatick humors, or heavy carriage of the Conception.

2. From breaking of the Ligaments: then it comes of a sudden, afflicts with greater pain, and is oft followed with a flux of blood; it is from the aforesaid causes, or from Abortion, or Violent drawing forth of the Afterbirth.

3. From Corrosion of the Ligaments; then there are signs of an Ulcer, and matter flows out: The opinion of some is that the Womb may ascend out of its place upwards, but that is false, for 1. it is so tyed with four Ligaments that it cannot be moved upwards at all. 2. Because it is tyed to the right Gut and Privities, if it had an Animal Motion and should be lift up, those parts must also be distended. 3. Nor is yet lifted upwards although it be swelled with Wind or Water;

but that running Motion which Women feel about their Navels is rather the Testicles, and the *Cæcum* or blind Gut, than the Womb it self.

LXXIX. Weakness of the Womb. It is a dullness and defect of it, in performing its actions, through Distemper thereof, want of Native heat, or some occult Quality. It is known by an Inordinate Flux of the Terms, Languishing Venereal desires, pain in the Loyns and pecten, want of pleasure in Coition, manifold Abortions, Wind-breaking from the Womb.

The Differences. 1. One is from a Simple Distemper of the Womb, which see above at Sect. 70. 2. Another from the Innate heat, either choaked or dissipated. 3. Another from occult Qualities, from its particular Sympathy or Antipathy; wherein the Affect rises from no evident or apparent Cause.

LXXX. Pain of the Womb. It is a sad kind of Dolor proceeding from the Solution of Continuity thereof, or in some of its parts. It is a Disease that befalls Women great with Child, that are free, and that are past Labour. *The Differences* arise from the Causes. 1. One is from Corrosion, this mostly affects the Neck of the Womb, and arises chiefly by reason of Ulcers, the Whites, evil and acrimonious courses, &c. 2. Another from Distention by a Clot of Blood sticking in the Capacity of the Womb, and then a large flux of the Terms from the Womb precedes, and the pain is fixt, and is felt much

much about the Orifice of the Womb, wherein nature, endeavouring to abate it, draws the Intestinum Rectum and bladder into Con-
 sent, so causes a Tenasmus and often pissing. 3. By Menstruous Blood, which is obstructed, or is too thick, and then there will be Signs of the Terms suppress'd, or not flowing rightly. 4. Another from Vicious humours sticking in the Capacity of the Womb; Or from the fermentation of those humors, which is sometimes raised by Coition. 5. Another from an Inflammation of the Womb, of which See Sect. 73. foregoing. 6. Lastly, Another from the Seed retained and corrupted, wherein you must have respect to the Suffocation of the Womb, which see Sect. 23. proceeding.

LXXXI. Flux of the Whites.

It is an inordinate Excretion of an Excrementitious humour from the Womb, white, sometimes thicker and sometimes thinner, arising from fault either of the whole or of some part; it is known by sight, and the relation of the party. It sometimes affects Virgins, yet more commonly those of riper Age, of a cold and moist constitution, who lead an Idle life, and feed upon cold and moist Food; as also Old Women even to their death. It differs from a Simple Gonorrhœa, because in that the matter of the Seed flows forth: from a Virulent Gonorrhœa, because in that the matter is of various ill colours, stinks, and is commonly accompanied with Symptoms of the Pox: From Nocturnal Pollution, because they are joyn'd with

a Venereal Phantasy and Pleasure: From Courses discoloured, because they observe their Periods, though not always exactly, and happen not to Women with Child: From the matter of an Ulcer of the Womb, because there goes with it the Signs of an Ulcer. The differences. 1. One is caused from a Cacochymick habit of the whole Body; and then there are signs of a Cacochymy, and the flux is the more plentiful: Another is from some part besides the Womb, and then there are Signs of that part affected. 2. Another from the Womb it self, arising from the distemper of it, which is known for that there are Signs of the Womb affected, and then the flux is not so plentiful.

LXXXII. Madnes of the Womb.

It is an Immoderate desire of Venery, almost making Women stark mad, coming from sharpness, and plenty of Seed. Those who are most troubled with this Disease are strong, youthful, black, and well flesht Virgins, having adust blood; as also youthful and lusty Widdows; and such Married Women as have impotent Husbands: It cannot be unknown to the Diseased themselves: Others may know it by their wasting and pining away, sadness and silence, suppressing of their desires: But some being overcome of it, do talk madly, the most bawdy discourses, break out into Anger, Laughter, Weeping; or are Lascivious and Wanton, who through the Violence of their Letchery voluntarily

luntarily prostitute themselves, and intice men to lye with them. *I once saw a Maid afflicted herewith, who not only talked all manner of baudery, but with much violence and anger prostituted her self, and would seize upon all sorts of men kind that came near her, to force them to lye with her. The Cause is heat, acrimony, and plenty of Seed, caused from heat of the Womb, distemper of the Stones and Spermatick Vessels; whence many have an Inflammation of the Womb, Itching and other Symptoms: Sometimes it is caused from drinking Hipocras and other delicate Wines in which some Borax, &c. was dissolved.*

LXXXIII. Barrenness. It is an Imporency to conceive Children, arising from default either of the Instruments of Generation, or of the Seed, Or of the Womb, Or of the Menstruous blood. *The Differences:* 1. From the Instruments of Generation, wherein they are said to be faulty either in Magnitude, Scituation or Virility. 2. From the Seed, being faulty in that it is not bred, or not bred in a sufficient quantity; or is defective in its quality, as being too thin, or too thick, or not sufficiently repleat with Vigor and Spirits whereby it does not stimulate the parts; Or by reason of Age, as being too young, wherein the Seed is not ripe, or too old wherein it is defective in Spirits. 3. From the evil conformation, or distemper of the Vessels dedicated to generate and contain the Seed, and then the Woman in Coition either perceives no pleasure, or but

little and short. 4. From the undue proportion and mixture of the Man and Womans Seed, which proceeds either from Medicines vitiating and extinguishing the Seed, as a Goats Commodity, Mint, Rue, Camphir, Agnus Castus, Opium, &c. Or from Inchantments. 5. From default of the Womb, wherein the Womb does not attract nor receive the Seed into it, and that is caused either through weakness of the Attractive faculty, Or through slipperiness of the Womb, wherein it cannot retain the Seed, caused by a cold and moist distemper thereof, Or a perpetual flux of the Whites; Or by reason of some Organical Disease, Obstruction, Tumor, Or Membrane growing over the Orifice of the Womb, Or by reason of some solution of Continuity either Recent or putrified. 6. From fault of the Menstruous Blood, which is either wanting, Or is too plentiful there by drowning and suffocating the Seed, Or is obstructed in the Womb, there by taking up the true place of the Seed.

LXXXIV. Mola, It is an Imperfect Conception generated by fault of the Seed, being a Mass of flesh without Bowels or Bones. Of this we have shewed the Chyrurgick Extraction. *lib. 4. cap. 16. sect. 3. Of this Work.* 'Tis known, 1. By a Trembling Motion, and its falling like a Stone. 2. By the Figure and Bulk of the Womb, being swelled every ways, whereas in a true Conception it is principally raised towards the Navel. 3. By want of Milk; for though the Breasts swell, yet there is only a crude

crude watery humor from the Courses suppress'd, which in the process of time Vanishes, whereas in a time of Conception, about the fourth Month, there is Milk generated. 4 By other Symptoms as difficulty of Breathing, pains of the back, groins, &c. *It is caused from a default of the Seed in both Sexes jointly, the formative faculty being weak either of it self, or because overwhelmed with Blood, when Coition is at the time of the Courses, or when they are near at hand. This mass is without bones and bowels, yet sometimes very Membranous, viscous and fast joyned together, so that it will not yield to Iron: sometimes it is of a long form, and sometimes Rhomboidal: sometimes without life, sometimes it has the life of plants: sometimes it is Voided alone, and sometime with a Child, and sometimes a dysentery goes before the voiding of it.*

LXXXV. *Abortion or Miscarriage.* It is when the Child is born before its time, and it is the same whether the Child be living or dead: It is foreknown by an unusual heaviness of the Loyns and Hips, loathsomeness to stir, appetite gone, shivering and shaking coming by fits, pain of the head, especially about the Roots of the Eyes, a straightning of the Sides, and of the Belly above the Navel, the flagging or falling and extenuation of the dugs, which made Hippocrates to say, Sect. 5. Aph. 37. *if the dugs of a Woman with child do suddenly grow small, that Woman will Miscarry.* For that does signify a want of Blood in those Veins

which are common to the Womb and the Dugs, by defect of which there is danger of Miscarriage: So also plenty of Milk flowing from the Dugs, Or a sudden flux of the Terms from the Womb, Frequent pain, and almost continual in the Reins and Loyns reaching towards the Pubes or share, as far as the Os Sacrum, with a certain endeavour to cast forth of the Womb, there following those pains, blood either pure or watery, all these signify that abortion is near at hand that the Vessels and Membranes of the Womb are broken, and those Ligaments wherewith the Child is fastned to the Womb are stretched and torn in sunder; then is the Mouth of the Womb open, and the Scituation or posture of the Child is changed; being now gathered round like a foot-ball, and rouled down towards the Water gate. *It is caused in general through a default both of the Retentive and Expulsive facultys, the former being weakened either by humors or diseases; the latter being irritated, by the Magnitude or ill position of the young one, or from other particular causes,* as, 1. Taking of Cold, the pain being then about the Kidneys, descends to the lower parts of the Belly, and afflicts like to Nephritical pains. 2 From a sudden fright. 3 From a Syncope or Sneezing fits. 4 From Anger or Fear. 5 From the loss of something longed for. 6 From afflux of the Bowels or the Womb. 7. From External Causes, as blows, falls, leaping, straining; and such like.

LXXXVI. Hard Labour in Child bearing. It is that which takes up a longer time in expelling the Child than is usual, is accompanied with more violent pains, and more grievous Symptoms. 'Tis known by length of time in Labor, as one, two, three, four or more days, weak pains, and long before they return, being more about the Back than Privities, disorderly posture of the Child, &c. Other Symptoms are visible to the Eye. The Causes are either Internal or External. The Internal are in respect of the Mother, of the Womb, and of the Child. 1. In respect of the Mother, as being Weak, or very Young, or very Ancient, or troubled with some Disease, to which add too much leanness, or dryness, or fatness, or grossness, compressing and straightning of the Vessels of the Womb, ill shape, or conformation of those parts, &c. 2. In respect of the Womb, being diseased, as having Inflammations, Tumors, Ulcers, Obstructions, Astrictions, Stoppages, &c. arising from preternatural causes. 3. In respect of the Child, when it is dead or putrified or weakened with some Disease (not being able to contribute to its own exclusion) or being discreet, or concreet to some other substance, Or if its body or head be over great, Or there be more than one in the Womb; Or it be ill situated or posited, endeavouring to come forth with its feet foremost, or doubled with its Breech, &c. foremost; Or when the Membranes enclosing the Child break sooner than they should; or are too strong, that they cannot be easily broken when the time comes. 4. Ex-

ternal Causes, which are the air too hot or too cold; meats hard, raw, and of an Astringent quality, taken before the time of Travail, a sleepy disposition; unseasonable stirring of the woman against the Midwives order; retention of excrements at time of Travel, as ordure, urine, hemorrhoids, which straighten those passages, vehement passions of the Mind; as, Fear, Sadness, Anger, &c. To which add Falls, Blows, Wounds, &c. As also an unskilful Midwife, whose Error is wont to cause difficulty of Birth. For sometimes the Midwife does too soon exhort the woman to hold her Breath, and strain her self to exclude the Child, while the bands which fasten the Child to the Womb are as yet unloosed, by which means the strength of the woman is wasted before hand, which should have been reserved to the just time of Travail; Thus they bending all their strength too soon to exclude the child, break the bands with which the Child is fastned, and bring themselves into great hazards.

LXXXVII. of a dead Child. In hard Labor by reason of the length of time, the Child is many times killed, or is sometimes dead by some other preternatural accident aforehand. It is known by the ceasing of the motion of the Child which the Mother may easily be sensible of, or the Midwife may perceive by laying her hand thereon, or applying those warm things, which use to rouse and stir it up; the Woman finds a greater sense of weight than for-

formerly, with pain of the Belly ; the Child rrouls from one side to another like a Stone ; the lower part of the Belly feels cold ; Eyes become hollow and troubled ; Face and Lips pale ; the Extreame parts cold, of a Leaden colour : dugs flap or grow flaggy ; at length when the Child rots, stinking moisture flows from the Womb, like Water and Blood ; the Belly is swelled with Wind and Vapors ; a filthy smell and stinking breath comes out at the Mouth, and from their whole bodies ; Lastly, if the Afterbirth comes away first, it is a certain Sign the Child is dead. *The Causes are all such things as may cause hard Labour in Child birth (which see at Sect. 86.) whether they be Internal or External : But especially if it be kill'd at time of Birth, it is by reason of its untoward or preposterous figure, by which neither Midwife nor Chyrurgian can draw it forth, without pulling it to peices, nor yet reduce it to a better posture, wherein sometimes the Child dies alone, and sometimes both Mother and Child.*

LXXXVIII. *Symptoms in Child bearing.* 1. *An Untimely flux of Blood, just before the birth, this is caused through Faintings, weakness of strength and of the retentive faculty, with too great a force of the Expulsive* 2. *Retention of the Afterbirth.* If it is retained whole, it needs no Signs to be known by ; but if in part, the Womb yet labors to cast forth, there is a Sence of pain and heat, and after certain days a filthy and Carrion-like

smell comes from the Womb. The Cause is either the too great thickness of those Coats, and compactness, by which they tenaciously stick fast to the Sides of Womb ; Or because they swell by long and hard travail : Or because the Navel is either broken or cut off, before the afterbirth is come forth. 3. *Immoderate flux of the Loches, Or Child bed Purgations.* It is known by the fainting and decay of the Womans Spirits and strength, the blood is clotted, and she loaths all meat, is pained under her short ribs, feels a distention of her Belly, pulse weak, sight dimm, noise in her Ears, and is subject to fainting, Swooning and Convulsions. It is caused either by reason of great plenty of Blood, Or because of its thinness : Or from her using of hot things ; Or the over wide opening of the Vessels, Or rending them in hard labour ; Or the Violent drawing forth of the Secundine. 4. *Suppression of Child-bed Purgations.* It is manifest of it self ; yet there is a Swelling of the Belly, a pain possessing the lower part of the Belly the Loyns, and Groins: redness of Face, difficulty of breathing, perturbation of the Eyes, shivering fits, fainting, &c. 'Tis caused from the thickness of the Blood, narrowness or Obstruction of the Vessels, Taking cold, especially into the Womb, which closes the Orifices of the Vessels, taking cold at feet, drinking of cold small, drink, fear, terror, sadness, and other passions of the Mind which with draws the Blood from

from the Womb. 5. *Gripings, Cholick, or after pains in Child-bearing.* They are caused either from plenty of blood; or its thickness and sharpness; Or from the Narrowness of the Vessels; Or by Wind or cold received into the Womb: if they proceed from thick blood, 'tis known by its clotting: if from thin Blood, by its tenuity, and fresh or yellowish color: if from Wind, they wander into several parts of the Belly: if from cold Air, you may know it by the relation of the Sick. They are differenced from other pains by their Continuance, and the Women themselves can easily distinguish them from others whatsoever. 6. *Fevers and other acute Diseases.* They are known by their own proper Symptoms. They are caused either from a too large generation of Milk; Or, from the Suppression of the Childbed Purgations; Or, from Store of Vicious humours lodged in the Womb; Or, lastly, from some extraordinary cold taken, by which the Tone of the Bowels, and of the whole Body is altered.

LXXXIX. Omphalocele, Rupture of the Navel, is a Tumor or swelling of the Navel, causing it to strut out, which is caused either from the Guts, *Omentum*, Wind, Water. Or, fleshy Substance fallen into it, or arising there. *The Differences.* 1. One is *Enteromphalos* or of the Intestines, when the Guts slide into the Navel; it is known by the Tumor not being very hard nor soft, holding the breath increa-

ses it; lying on the back sinks it, which when they go back it is with a noise and Rumbling. It is caused by falls, blows, jumping, riding, crying out, laughing, &c. 2. Another is *Epiplomphalos*, or of the *Omentum* or Caul, when it falls into the Navel; known by the Tumours being softer in one part, broad at the Basis, and narrow towards the Top; no present pain, and being prest with the Fingers it sinks, the Caul returning to its place. 3. Another is *Hydromphalos*, when the Navel is Tumified by Water. The Tumor is soft and loose, if prest it neither increases nor decreases, has a waving with it, and holding a Candle to it, it is clear and perspicuous: it is caused from Water gathered together between the *Peritoneum* and the skin of the Belly, arising from causes mentioned in the Dropsy. 4. Another is *Anemomphalos*, when Wind distends the Navel; the swelling is soft, yields to the Fingers, gives a sound like a Drum, and let the Sick lye which way he will, it is not changed. 5. Another *Sarcophalos*, when a fleshy substance fills up, or tumifies the Navel; then the swelling is hard, yields not to the fingers, nor is changed by any manner of position or lying.

XC. Sciatica. The Hip Gout. It is a pain possessing the Hip, top of the Buttock, the Loyns and *Os Sacrum*, reaching into the Thigh and Leg, even to the very foot. *The Signs* of this Disease are taken from the part

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pained, which is chiefly the Hucklebone, and this property it hath, that no humor, nor inflammation, nor change of Color appears, as is wont in other kinds of the Gout; because the flowing matter does insinuate it self into more profound or deep parts, and into such as are larger, and covered with more flesh, not touching or being diffused into the superficies of the body, or neer the skin, as in other Gouts. *The Cause is the same which we propound in other sorts of Gouts, and to which we referr you.*

But these things you may observe,
 1. *That this pain oftentimes afflicts the middle spaces between the joynts.* 2. *That many times it afflicts a man once or twice, and returns not again, all his life time after.* 3. *That it diffuses it self more largely here than in other joynts, because of the large ends of the Hip-bone, and also by reason of Nerves arising out of the Loys and Os Sacrum, which are carried to the Hip, and from thence derived and spread to the Thighs, Leggs and Feet.*

CHAP. LV.

Of Diseases which affect the whole Body.

I. **C**hlorosis, the Green Sickness or Virgins Disease, is originally caused through Obstructions of the Liver: the Face is pale and white, or of a leaden blew, greenish or yellowish Colour; the whole body is lazy and purfie; to go up a Hill, or stir about is almost Death, with shortness of Breath, there is loathing of Food, and desire of evil things as in Pica, and in the height of the Disease, Stoppage of the Terms. *'Tis called the Virgins Disease, because it happens most commonly to Virgins, especially to the fairer, To the former Signs you may add pain of the head, and sometimes mad-*

ness, melancholy Vapours being elevated; a palpitation of the heart if they stir much, with much beating of the Pulses in the Neck, Back and Temples, inordinate and Erratick Feavers, from humors putrified in the Stomach; A Pica from many evil humours lodged in the coats of the Stomach; Vomiting from the great Crudity of the Stomach, and distention of the Hypochondres, by reason of Wind, and a reflux of the Menstruous Blood to the Greater Vessels; A swelling and softness of the whole body from too great humidity, more especially a swelling of the Eye lids in the morning after sleep; or of the Legs, Ancles and Feet

towards the Evening, from abundance of Watery humors. The cause is from a great quantity of Crude humors heaped together, chiefly in the Stomach, Liver, Spleen, and Womb, arising either from ill diet, laziness, obstruction of the Courses, native straitness of the Vessels, obstructions of the other Viscera, or eating unnatural things as Chalk, Earth, Nutmegs, Pepper, Oatmeal, Loom, drinking Verjuice, Vinegar, &c. Now the passages being stop't, the Menstrual Blood regurgitates to the greater Veins and Vessels, where creating Obstructions, it suffocates the Native heat, whence arising evil Concoction and Indigestion, the humors are dispersed over the habit of the whole body.

II. *Cachexia*, is an evil state and disposition of the whole body, enclining it to moiſture, making the Flesh wax loose and soft: this Disease generally follows some long Sickness; and is caused from Obstructions or Hardness of Liver, or Spleen, or both: it happeneth often in a continual *Dysenteria* and *Lienteria*: the whole body is made whitish and weak, that they can scarcely go; there is bad Digestion, loathing of Meat and desire of Drink, Old Men and Children are chiefly afflicted herewith. Or thus. A *Cachexy* is a diffusion of humidity, or of a Watery humor through the habit of the whole Body through want of Nourishment, by which it is swelled and made soft; more especially the Skin and Muscles. The sick is heavy and sluggish, and there is a gentle swelling of

the hands and feet, by the diffusion of Watery humors, as also about the Eyes, Face, Cheeks, &c. The Cause is want of Concoction, and a due Generation of Chyle, whereby the whole Body wants a supply of good Nutriment, it being only furnished with Crude matter not assimilated, whereby the Blood becomes crude, flegmatick and serous, either from ill dyet, a Scirrhus of some internal Viscera, or Corrupt humours from Obstructions of the Terms, Ureters or other parts; or lastly, from the Continuance of Diseases, or too great evacuations.

III. *Scorbutus*, the Scurvy, is a Disease generally accompanied with all the former Signs, being a Corruption and Putrefaction of the Blood and Humours, with Pains sometimes running up and down the body: the special Signs are, Spots appearing and dilappearing up and down the Legs, Thighs, and fleshy Parts; and lastly, when it affects the Gums with soreness and bleeding, it is then said to be the Scorbut confirmed: it is generally caused through Obstructions of the Spleen. Some Authors affirm this Disease to be known to the Ancients, under the Names of *Oscedo*, *Scelotyrbe*, *Stomacace*, & *Volvulus Sanguineus*, though others as stoutly deny it; it is most familiar to such as inhabit the Sea-Coast, or in Fenny and moist places. To the former Signs you may add a Pulse various, weak, unequal, faint and Vermicular; Urine various, at first thin and yellowish, then thick and white; when the humors are more corrupted, 'tis red; after, shining like

a Lye, then without any mark of putrefaction; sometimes it is thick and continues so, sometimes clear, casting to the bottom a red Sediment like powder of Brick; at other times crude and flegmatick matter falls to the Sediment, and sometimes the Urine comes forth by drops and with pain and heat, containing a Tartarous, Mucous, Salt and blackish Sediment. The Cause is from *Acra bilis*, or a Melancholy humor crude, serous, mixed with Flegm, after a peculiar manner corrupted, contagious and produced from Food wanting Volatile Salt, whence the Concoction being hurt, things Tartarous and feculent are bred, which stop the first passages, and so plentifully flowing to the Spleen cannot be again separated; where primarily residing in those first passages, Mesentery, Caul, and middle places, between the Stomach, Liver, Spleen, and adjacent Bowels and secondarily, in the Veins and Arteries of the whole Body, the generated Chyle is made impure, and is wanting in Volatile Spirits, by which the Liver is weakened, the Blood corrupted, and from thence the whole Body is rendred Cachectical and polluted, which is the true cause of many future, violent and dangerous Symptoms which afflict at set periods, and are found some in one person, some in another. The Symptoms. 1. A difficulty of Breathing, and straitness of the Breast, with dimness of sight, and fainting, from Vapours and Humours sticking in the cavity of the Caul, and compressing the Midriff. 2. Itching Tumors and putrefaction of the Gums, from a thin, sharp, corrosive humor as-

cending thither. 3. Many spots in the Thighs, and some in the Arms and Legs also, which most commonly appear in those of ripe Age: first they are ruddy and like flea bitings, then purple and somewhat livid, and at last decline to a blackish color; sometimes when there is many, they invade the Breast, Neck, Arms and Face: sometimes they vanish suddenly, sometimes continue many years, and sometimes turn to scales, and so much the more livid as they are, so much the more dangerous. 4. A pain of the Thighs, distensive, dull, lying deep, and as it were piercing the Bones, which by reason of the motion of the Melancholy humor afflicts most towards Night. It arises from a serous humor sometimes poured out of the Veins by the Crural branches of the Vena Cava, and insinuated into the Muscles of the Thighs. 5. A pain of the Belly, so violent sometimes that it causes a Rupture of the Peritoneum, which troubles at set times: sometimes it lasts to the fortieth day; it is caused from sharp matter, sent into those Bowels by the Meseraick Veins. 6. Pain of the Feet, about the Ancles and Soles, which is commonly a forerunner of the spots. 7. Pain of the Hypochondres, Nephritical and of the Loyns, the matter descending by the Emulgent Vessels to the Kidnies, Or falling by way of a Catarrh, from the head by the Veins to the Spinal marrow, the pains beginning at the Shoulders and descending by Degrees to the Loyns. 8. Pains of the head, joyned with a Feaverish heat; they often arise from a suppression of the

the Hemorrhoids, trouble most about the Evening, and vanish away in morning sweats. 9. Arthritick pains, wandring, ceasing and returning, and for the most part joyned with a light Palsy, arising from serous humours, thin and apt for motion. 10. A Palsy which sometimes invades the Thighs, sometimes all on one side, arising from the Scorbutical matter conducted to the Spinal marrow by that branch which extendeth from the Aorta, not far from the Mesenterical branch, and so creeps to the back bone and its Vertebraes. 11. A Convulsion and Contraction, which sometimes grows so strong, that the Sick are not able to extend any joynt, but are drawn as it were round; it is caused from the rigidness of the Tendons, the serous humour being discust, the Tartarous matter is left and dried. 12. Drowiness and deep sleep, which sometimes afflicts with a slow continual Feaver, sometimes with an intermitting, the latter of which comes with the fit, and goes away with it. 13. Palpitation of the Heart and Swooning upon the least motion of the humors, and 'tis so great sometimes that the sick dies suddenly; if it afflicts in a small Disease, it is a certain sign of the Scurvy. 14. Vomiting, or rather a vain endeavour to Vomit, no heaviness or pain of the Stomach going before. 15. Too much spitting, which may be caused from Food corrupted in the Stomach, or vapours raised to the mouth from the parts adjacent to the Stomach; Or from a serous humour cast forth from the Spleen into the Stomach

through the Vas breve. 16. A flux of the Belly, sometimes of a green, sometimes of an ash colour, and sometimes Bloody, arising from weakness of the Attractive faculty of the Liver, or serous matter flowing from the Spleen; Or Serum not dissipated through the Pores, but driven back to the Guts or Vessels. 17. Feavers, much differing from other Feavers, wherein the sense of cold lasts sometimes 6 or 7 hours, and sometimes are excited 2, 3, or 4 times a day. 18. A Dropsy, afflicting with a manifest and morbid tumor, distention of the Liver, Spleen or Belly, and with a greater difficulty of breathing than otherwise. 19. An Erysipelas, which afflicts sometimes once a week, sometimes once a month, arising from an ichorous humor putrified in a peculiar manner. 20. Ulcers which are dry, and yield little or no matter or corruption, afflicting those most who are of a Choleric habit, possessing themselves of the Thighs, and many other parts; and sometimes they degenerate even into Gangreens. 21. Pushes and hard bunches in the whole body, with Tumors in the Glandulous parts like to Muscles, which are without pain the sick being quiet, but with pain when they stir much or walk. 22. A Consumption arising either from the nutriment disappointed by want of Concoction or Obstruction; Or, by reason of its vitious disposition, imprinting on the habit of the body, the same Character and Property.

IV. Hydrops, the Dropsy is an universal watery habit of the whole body; and it is threefold, to wit, Ascites, Tympanites Anasarca. Ascites is when much

ter is heaped up between the Peritoneum and the Bowels, so that when it is struck, it doth squash as it were: *Tympanites* is when much Windiness is gathered in the aforesaid places, so that it is hard, and sounds (being struck) like a Tabor or Drum, the other parts waxing lean. *Anasarca* or *Leucothlegmatia*, is when the watery Humor is dispersed over the whole body, that all the Flesh appears moist, swoln and wet: they are caused either through cold taken, or very much cold water or Drink being drunk, or defect of the Liver: there is shortness of breath, swelling, heaviness, evil Colour, and great Thirst: the Legs (being swoln) if touched hard, will pitt. A *Dropsy* in General is a præternatural Tumor or swelling of the Body, or a part of it, arising from a Collection of Pituitous and watery humours, or Wind, or both. It is known by a swelling and puffing up of the body or skin, heaviness, difficulty of Breathing, pain in the right or left Hypochondries, whitish or evil colour of the face, sometimes declining to a yellowish or Leaden Colour, little Urine, and deep coloured, great and continual Thirst from the assent of Volatile Salt vapours. drying up the mouth of the Stomach, and excessive heat of the Heart and Lungs, for want of humidity, refrigeration and Air, whence the Legs and Feet swell, 'tis chiefly after exercise and towards the Evening, because not only of the weight of the humor, but the parts

are depending, which in the night time by lying alo. g. and heat of the bed is again dissipated. The Cause proceeds from defect of natural heat, imbecility of the Stomach, and obstruction, whereby the Nutriment is not well concocted, and then by reason of the Obstruction, is made Watery, and diffused over the habit of the Body. As to the Species or kinds of a Dropsy, viz. *Ascites*, *Tympanites*, and *Anasarca*, See them in the former Chapter.

V *Exanthemata*, *Variolæ*, *Ecthymata*, the Small-Pox, are small Pustles which arise and break forth in the Skin, (accompanied with a Fever) through Putrefaction and Corruption of the Blood: this Disease is generally apparent, yet these Signs go before; there is Pain in the Head and Back, heating and pricking all over the Body, the Face red and swoln, Sleepiness and red Urine, accompanied with a Fever; on the third and fourth day they generally come forth. *Morbilli* *Sudamina*, *Rubiolæ*. The Measles are only certain red and purplish Spots.

They break forth upon the Skin, with a continual Fever, caused by the exagitation of the Expulsive faculty, and a peculiar fermentation or boiling of the Blood: of these diseases see more in the Chapter of Fevers following.

VI. *Lues Venerea*, seu *Morbus Gallicus*, the French Pox, is a Disease gotten through the using of unclean Bodies, and is known by these Signs: there is a certain Weariness all over the Body, without any Labour or other reason, with a lumpish Heaviness

vinefs, Dullnefs, Faintnefs and Lazinefs with certain pains wandering through the whole Body, out of one part into another; the Colour of the Face waxeth pale, with a decay of Livelinefs; Heat in the Palmes of of the Hands and Feet, Droufinefs and Sleepinefs, Unpleafantnefs of the Mind: fometimes there is putrefied Matter in the Privy parts, with Sorenefs; fometimes a Bubo, or fmall Swelling in the Arm-holes or Groin: fometimes there is *Gonorrhœa simplex*, and fometimes *Virulenta*: and where the Dif-eafe is once rooted, there is Ulcers in the Privy parts, Blains, and Borches in moft parts of the Body, with extream Torment, hard Knots, and nocturnal excruciating Pains in the Shin-bones, with Ulcers in the Head and Nofe.

This difeafe is defined by fome to be a Virulent and contagious Cachexy of the whole Body, raging for the moft part with a hot Diftemper, falling of their hair, Spots, Pimples, Scabs, Warts, Swellings, Bubbles, malign and rebellious Ulcers, and great pain in the Head, Shoulders, Arms, Hands, Leggs, or Shin bones, more efpecially in the night, decay of the concoctive and nourifhing faculty, by reafon of a poyfonous and malignant quality, transferred and conveyed by contagion, chiefly by Copulation, whereby the whole habit of the Body is altered, affected, and contaminated, the Dif-eafe tyrannizing with a Troop of malign Symptoms. 'Tis called by many names, as Lues Venerea, Morbus Gallicus, Syphilis, The Great Pox, French-

Pox, Spanifh Gout, Indian Dif-eafe, &c. It commonly affects the whole body in general, and an affected and contaminated Liver in particular, from whence a corrupted, malign and poyfonous Blood mixt with like putrefied humours is difperfed into the whole habit of the Body, depraving the univerfal nourifhment of the Same. The Signs. 1. A light wearinefs of all the Members with a heavinefs of the whole body. 2. A fmall wandering pain through all the parts, caufed by a Vapour from the Liver. 3. A change of the Colour of the Face, with a blewifh Circle under the Eyes, as in Menftruous bodies. 4. An Exceffive heat in the Soles of the Feet, and in the hands even in Winter. 5. Interrupted and unpleafant fleep. 6. Corrofion and Ulcers of the Secrets, from the malign filth of womens privities. 7. Bubbles or Swellings chiefly in the Groin, but not growing very great. 8. A Virulent running of the Reins, accompanied with ftink, evil color, and Ulcers of heat and fharpnefs of Urine: the aforefaid are the Signs in its beginning; what follow are the Signs of it being confirmed. 9. Hard Puffles (almost like Warts) all over the Body, efpecially the Head, Neck, Face, and Beard, arifing about the fourth, fifth, fixth, feventh or eighth Month, fometimes with a Cruft, fometimes not; fometimes with running and filth, and fometimes not arifing from a Contagious Matter fent from the Liver. 10. Callous Ulcers fometimes eating like a Canker, in the Privities. 11. A Softnefs and hanging down of the Uvula, which is attended with hoarfenefs of

Voice, and sometimes with Cankers and malign Ulcers of the Throat.

12. Tumors or Swellings in the Glandules of the Jaws, from the matter communicated to the Head.

13. A horrible pain of the Head. continuing not only some days and weeks but many month, in such an extream manner sometimes as almost to occasion Madness.

14. A Corruption of the Pallet and Teeth, which shews the highest degree of the Disease confirmed.

15. Excruating pains, arising just before the Evening, and continuing generally all Night, till towards Morning, (from whence they are called Nocturnal pains) they arise from a malign Vapor, and afflict the Periostia of every part but chiefly of the Shin-Bones.

16. A Corruption of the Bones of the Head and Arms, before Ulcers do arise.

17. Malign Ulcers breaking out all over the whole Body, from the Universal contamination of the whole mass, by the Malignity and Virulency of the Disease.

18. Falling of the Hair, Scabs, Warts, Crufts, Callosities and clefts in the Palms of the Hands, Soles of the Feet, and other parts.

19. Noise and Tingling of the Eares, from Malign Vapors ascending to the head, being stopt in, that they cannot get out.

20. Cankers, and horrible eating Ulcers of the Nose which sometimes wholly consume it; eating also up to the Scul, and through the roof of the Mouth.

21. An Abominable stinking breath, from the Contaminated matter of the Stomach and Mouth no ways to be removed but by the Cure of the Disease.

The Cause. It is a Spiritual, Poyso-

nous Malignity arising from impure Coition, communicated by Contagion; where by the force of the natural Spirits being weakned, the Liver and humors, contaminated and inflamed, the blood contained in the Veins is corrupted and the whole body possessed with a Pocky Cachexy. The Symptoms.

Those which we are to remark here are such as require a special Method of Cure, besides the general method of the Disease.

1. A Rottenness either in the Glans or Channels of the Yard, Or in the Neck of the Womb.

2. A Tumor of the fore skin of the Yard, so that the Glans cannot be uncovered, or not without a great deal of pain.

3. Callousness of the Foreskin, Callous Scarrs, Warts, and Excrescences.

4. Carnosity in the Channel of the Yard.

5. Buboës of the Groin, and Swellings of the Cods, a Contagious running of the Reins from impure Coition either present or going before.

6. Falling of the hair, from the Corrosion of the malign humor gnawing its roots.

7. Intolerable pains of the Head.

8. Nocturnal pains of the Joynts and Shins.

9. Pustles, and hard Scabs upon the Head, Neck, and Face.

10. Clefts, efflorescencies and Impetigo in the Palmes of the Hands and Soles of the Feet.

11. A Virulent running of the Reins.

12. Scurff, Morphew, and a kind of Leprosy, going away and returning.

13. Hardnesses, Knobs, and Gummofities.

14. An Atrophy or Consumption; wasting and consuming the Body away to Skin and Bone.

VII. Rheumatismus, a Rheumatism,

matism, is that which some call the Running Gout; it universally afflicteth the Extreame parts of the Body; being a Pain running continually out of one Joynt into another: it is caused from a thin, sharp, windy and spirituous Matter, which being carried up and down, with the arterial blood, afflicteth the parts aforesaid.

This is a strange kind of a Disease, called by some Physicians which know not the nature of it the Universal Gout: but herein this differs from the Gout, for as in that the Joynts are only pained; in this not only the Joynts but the whole body is pained, so wit, the middle spaces between the Joynts, namely the Muscles and their Membranes, and especially the Periostria, together with the habit of the whole body: It differs from a Catarrh, for that only comes from the Brain, and afflicts no more than one or two parts, whereas a Rheumatism arises from the Internal Bowels, and by the Veins and Arteries is diffused over the habit of the whole Body. It is caused from a fault of the Liver, generating Wind, and a crude, thin, wheyish humor (which by reason of its thinness neither swells the parts, nor turns to matter, so never makes any Apostome :) this Serous humor being sent into the Veines and Arteries, and being long detained there whereby it is corrupted, it is joyned to the Natural and Vital Spirits, by which it is moved to the habit of the whole Body, where, being made sharp, it pricks, and cuts as it were, whence manifold Pains and Torments do arise. The sudden

Motion of the pain, shews that the humor must be joyned with a Spirit, and be of it self exceeding thin, without which it could not be apt to move; and this is so much the more apparent because this Disease is often terminated by Sweating. In the Gout when the pain is gone there remains a weakness; but in a Rheumatism after the pain is gone, there remains none. But besides the Liver, from which we esteem the Original Cause of this Disease to arise, we do conceive that it is oftentimes excited and augmented, by sharp humours flowing immediately from the Brain, because these pains do often begin in the Neck, and so descend to the Shoulders, Arms, &c. But the first concretion of those sharp humours was in an Inflamed Liver, from whence they were translated into the Brain.

VIII. Arthritis, Morbus Articularis, the Gout is a Disease of the Joynts, infecting them with pain: in the Sholder it is called Onagra: in the Hand Chiragra: in the Hip Sciatica: in the Knee Gonagra: in the Foot Podagra: it is known from the Relation of the Sick, afflicting the Joynts only, with tormenting Pains: it is caused of a sharp thin and spirituous Matter, offending rather in Quality than Quantity, flowing down into those parts, and Sympathising with the humor abounding.

The Gout is a Disease commonly invading the Patient by fits, and at set periods of time, with pain weakness and feebleness of the part, hinderance of Motion, and sometimes with a Tumor or Swelling and

and redness: the subject affected are the Joints, and the Membranous parts and ligaments about the same, especially those endued with the greatest sense. The Signs are evident from the relation of the Sick: if it be the Podagra, it first invades the great Toe, and for the most part the left Foot: Or if the Chiragra, the Thumb or little Finger, and for the most part the left Hand; and sometimes only the Right, and sometimes both: afterwards there is a Tumor, heat, and redness of the Part, with an Impotency to move, and in an Inveterate Arthritis hard Knots, or Knobs resembling Stones, Chalk, Tartar or such like. It is oftentimes caused by heats and colds, or bred by drinking unwholesome Wines not freed from all their Tartar, but especially all French Wines, and eating crude and unnatural Food, where being corrupted in the Stomach a Vicious

juice is bred, which being made spiritual by mixing it self with the Natural, Vital and Animal Spirits, and then conjoynd with the Blood, it is sent to the Joints by the Veins and Arteries: from whence it comes to pass that when the Paroxysm is at hand, the Vessels which lead to the Hands and Feet, and are inserted to the utmost joints, do grow painful, wax feeble and swell; to which places it is rather moved than to other parts, because the Ligaments and Tendons being nourish'd with a more Spiritous Blood, they not only attract, but the Spirit also carries along with it the Tartarous humor mixt with it, whence indeed comes the Gout. Now when the Spirit leaves the matter, the humidity does afterwards by degrees Vanish, where at last remains hard Tumors, Knots or Nodes, like Stones, Tartar, or Chalk.

CHAP. LVI.

The Diagnosticks of Feavers.

I. **E**phemera, Febris, Diaria, is an one day Feaver, is that which hath only one Fit, finishing for the most part in one day: it is a simple Feaver, short and gentle: engendered only in the Spirits; not exceeding in Heat, Thirst, nor having many evil Symptoms.

The other sorts of Diseases which afflict the whole Body are Feavers.

1. A Feaver is a hot Distemper

of the Body, arising from a preternatural heat kindled in the heart by means of the Spirit and Blood, diffused through the Veins and Arteries into the whole Body, and thereby hurting the natural Functions. Or thus, A Feaver is a swift Circulation and Fermentation of the Blood, through the Lungs, Heart, Brain, and parts of the whole Body. 2. The parts chiefly

fly affected are the Stomach, the Gut Duodenum, Liver, Pancreas, Glandules of the Mesentery and Heart. 3. This unnatural heat joyned with dryness produces a Non-putrid Feaver, with moisture a putrid. 4. The Cause is whatsoever kindles heat in the Body, First outward as a Blow, Fall, Contusion, External Cold, hindering Circulation, and stopping the Pores, Violent Exercise and Motion, violent External heat, as of the Sun, Fire, &c. Secondly Internal from the preternatural rigurgitation of Choler by the Vena Cava to the Heart and whole Body, not before hand duly mixt with the chyle and pancreatick juyce: Sylvius saies, The Cause of all continual Feavers is Choler or a Lympha (i. e. the Pancreatick juyce and spittle, they being carried with it to the Heart) or both Vitiated, and exciting such an effervesency in the right Ventricle of the Heart; and the cause of all Intermitting Feavers to be from the Stagnation of the Pancreatick juices by Obstruction, whereby they are made acid, sharp and penetrating, and then being cast into the thin Gut, their mixing with Choler and Flegm causes a vitious effervesency. 5. The kinds, Feavers in general are either Non Putrid, Putrid, Heetick, Malignant, or Pestilential. 6. A Feaver non Putrid is Either Ephemera, Diaria Simpliciter, an one day Feaver: Or Synocha Simplex, Synochus non Putrida, Diaria Plurimum dierum, a Diaria of more days than one: These are caused through the Spirits being inflamed. 7. A Feaver Putrid proceeds from putrefaction of the blood and humours, affecting the heart with

a preternatural heat. 8. This Putrefaction is two fold, viz. either within the Vessels causing continual Feavers, or without the Vessels causing intermitting Feavers. 9. Putrefaction of all the Humors equally within the Vessels causeth the Feaver Synochus Putrida, a continual putrid Feaver. 10. But if of One humor only, as of Flegm, a Continual Quotidian: of Choler Causos, or Continual Tertian: of Melancholy a Continual Quartan: To these add the continual Symptomack Feaver. 11. Putrefaction of the humors without the Vessels, causeth intermitting Feavers, commonly called Agues: if it be of Flegm, it causes an Intermitting Quotidian: of Choler an intermitting Tertian: of Melancholy, an Intermitting Quartan. 12. If the humors putrify both within and without the Vessels the Feaver is Compound, a Continual with an Intermitting; which if it be Flegm, it is a compound Quotidian; if Choler a compound Tertian; if Melancholy, a compound Quartan. 13. If both Spirits and humors without the Vessels be Inflamed; there is a Feaver Compound, of a Non putrid, joyned with a Putrid, this seizes the fleshy parts, and is called the Heetick Feaver, which is three fold, first a Non putrid with a Quotidian whence a Simple Heetick: Secondly, a Non putrid with a Tertian, whence a Marasmodes: Thirdly a Non Putrid with a Quartan whence a Marasmodes, 14. If the Spirits be Inflamed with a putrefaction of humors within the Vessels, the Feaver is Malignant, and is fivefold, viz.

viz. the Measles, Small Pox, Spotted Feaver, Morbus Hungaricus, Sudor Anglicus, the English Sweating sickness. 15. If there be an Inflammation and Putrefaction of both Spirits and Humors, and these also within and without the Vessels; there is Inflammation, Putrefaction, and Malignity of both Spirits and humors conjoined with Contagion; and this is Pestis, the Plague or Pestilence.

But to proceed concerning the Ephemera; It is a Feaver arising from the Inflammation of the Vital Spirits in the Heart, continuing the Space of one day; from whence 'tis called Ephemera. It is known by a sudden heat arising in the Body, without loathing of Food, weariness without Cause, sleeping and yawning preceeding it, and with little or almost no shivering, unless the Body be full of ill humors: The Urine little or nothing (in any respect) differs from the Natural, unless the Cause exciting the Feaver, raises some extraordinary fermentation in the Blood: The Pulse even, great, strong, but more quick and frequent than ordinary. The Differences. 1. One is from Crudity, known by an ill and diseased Stomach. 2. Another, from cold Air stopping the Pores, and then beginning without shivering; the Urine and Pulse change but little: and in the height the heat is moderate. 3. Another from heat of Weather, sadness, watching, weariness. 4. Another from a hard straight and compacted Skin, made straiter by dryness arising from the Blood being disturbed by any small Motion.

5. Another from Buboës, which is known by the presence of the Bubo, a swift and great Pulse, much heat and a ruddy countenance.

H. Synochus non putrida, Synocha Simplex, Inflativa, a Diaria of more days, is known by high Colour of the Face, Pain in the Head, soft Skin, but hot; an equal and ordinate Pulse, the Urine not much differing from its natural Colour, lasting sometimes three or four days.

Synocha Symplex is an Ephemera of many days, a Feaver without Putrefaction, arising from the fermentation of the Spirits and Blood, lasting three or four or more days without remission. There is a weariness of the whole Body without any exercise, heaviness about the Temples and forehead, itching of the Nostrils, a gentle heat, moistness of the Skin, distension of the Members, difficulty of breathing, Urine thicker and redder than ordinary, with a pulse full, frequent, great and quick. The Cause is from hot Vapors arising from the fermentation of thin Blood in a Plethorick Body, which Vapors being hindered from transpiring, excites the heat of the Feaver.

III. Synochus putrida is a Burning Feaver arising from putrified Blood in the Vena Cava, without any Periodical remission and Intention, afflicting alike from the beginning to the end. Synochô autem putrida Calor acutus contactum fuerit, Pulsus inequalis & inordinatus, Urina rubra, crassa, turbida, Sedimento nullo: in a putrid Feaver, the Heat is more sharp to the touch,

touch, the Pulse is unequal, Urine red, thick, troubled and without Sediment.

The Pathognomick or peculiar Signs are, Extream Thirst and Burning heat; which thirst is sometimes allayed by coughing, that causing an afflux of Moisture. To the former Signs you may add, Great Tossings and Tumbings of the Body by reason of heat: Breathing difficult: The Mouth bitter, because the inner Coat of the Stomach (which is common to it and the Mouth) is imbibed with Choler: The Tongue dry, because the burning heat consumes the humidity: The Stools are thin and yellow because Choler is shed into the Belly; unless the dung is hardened from the exceeding heat of the Feaver: The Urine little in Quantity, because of plenty of Sweats; Sometimes it is crude and troubled, and afterwards grows clear: Sometimes 'tis thin and flame-colored: The Sleep is sometimes profound when the Feaver is Spurious and not exquisite, because the thick Vapors being carried into the Brain stop its passages: Raving sometimes from the Volatilizing of Choler, which if it follows Trembling, it shews that Choler is transmitted out of the Veins into the Nerves; and out of the Nerves into the Brain. The Cause is Blood putrifying through an ill disposition of the Liver, occasioned by Food easy to be corrupted, which is either of an over heating quality: Or crude, and of an over cooling quality. The Differences. It is either Exquisite Or Spurious. 1. The Exquisite is Two fold either Continuent called *Causos* continents,

exquisitus, an exquisite burning Feaver, the which we intend here: Or Continual, called *Causos* continuus, Continua Tertiana, Febris Ardens continua, a Continual Tertian or burning Feaver, which see Sect. 5. following. 2. Spurious, proceeding of flugm, and then the Symptoms are milder and the Feaver is called *Causos* Nothus, a continent Bastard burning Feaver.

IV. *Febris quotidiana continua*, a continual Quotidian Feaver, is such a one as leaveth not off altogether between the Fits, but only a certain sensible slackening of the Heat: it is caused of one only humor which is Flegm putrifying within the Vessel, which effly in the branches of the *Vena Cava* and is a continual Quotidian; but if Choler, then there is a continual Tertian, i.e. *Causos*: if Melancholy, a continual Quartan: the Signs of all which, are the same with the pure intermitting Quotidians, Tertians and Quartans, save only, these begin not with Cold, as they do, nor is there wholly an intermission till they are ended. This continual Quotidian is daily exasperated towards evening, from the natural motion of the Flegm about that time; there is at first a gentle heat, which afterwards grows more vehement: In some there is a gentle coldness of all the extreme parts, but this is not found in all: This Disease, as it comes of Flegm putrifying, so it generally attends Old men, because of their Coldness, and Infants because of their much eating: and the Feaver is essentimys so stubborn, that it lasts

lasts sometimes three score days: It strongly weakens the Stomach, whence comes a Cachexy and Dropy. The Differences are threefold. 1. It is either simple and exquisite, arising from Flegm only, having Fits 18 hours long. Or Bastard, when the Flegm is mixt with other humors. 2. One is called Epiala, in which through the whole body, both heat and cold are felt at one and the same time: this comes either of Flegm mixt with Choler; Or from glassie Flegm, which in that part which is putrified is hot, in the part not putrified is cold. 3. Another is called Syncopalis, because it is accompanied with swooning Fits, and is twofold: First, Minuta, arising from a thin humor, little in Quantity, but venomous and putrified: Secondly, Humorofus, arising from much stigmatick and crude matter, with weakness of the Stomach, and frequent swooning fits.

V. *Causos continuus*, *Febris continua Tertiana*, *Febris Ardens Continua*, a continual Tertian or burning Fever (by Sect. 4.) is caused when Choler rotteth and putrifieth within the Veins, especially the branches of the *Vena Cava*: the Tongue is dry, gross, rough and black; there is gnawing of the Stomach, intollerable burning Heat and Thirst, and great Watchings; the Excrements be thin and pale. This Fever though Continual, yet assaults most every third day, and grows exorbitant, but never intermits so as to leave the Patient free: it is without any cold, shivering or shaking, and in its remission with-

out any sweats following it. The Cause is Cholerick blood, and whatsoever encreases that and other ill humors in the Veins, and causes them to putrefy. The Differences. 1. One is Exquisite from pure Choler, mixt with the Blood, wherein the Sick is afflicted with harper heat, thirst and greater watchings, then otherwise; the Pulse is violent, swift and hard, the Urine flame colored and thin, and the sick abounds much with Choler. 2. Another Spurious, termed Notha, or Bastard, wherein Flegm or Melancholy, is joyn'd with the Choler, and so mixt with the Blood, in which the Symptoms are not altogether so violent.

VI. *Febris continua Quartana*, A continual Quartan, is a Fever arising from Melancholy Blood putrifying in the Branches of the *Vena Cava*, whose heat always endures, but is principally exasperated every fourth day. The heat is obruse but sharp and pricking, from the dryness of the putrified humor; the Pulse at first, small, slow and buried as it were under the skin, afterwards great, full and swifter than in an intermitting Fever; the Sick spits much, which is caused either from the too great moisture of the Stomach, or fault of the Spleen, not separating the Melancholy humor. The cause is delivered in the definition, which is an Excrementitious Melancholy humor bred in the Spleen, either by its fault, or fault of the Chyle; Or, in the Meseraick Veins, and so conveyed to the Liver, where it is perfectly mixed with the Blood; the places putrefying.

lying are the Veins; yet not the greater, for then it would be a Continent Feaver; nor the lesser, for then it would be an Intermittent Feaver, or Ague; but in those between the great Veins and the Capillary, which are as small as the hairs of ones head.

VII. *Febris Quotidiana intermitiens*, an intermitting Quotidian, is caused of putrified Flegm without the Vessels: it comes not with vehement cold at the first, but colder and colder by Degrees, nor is the hot Fit very excessive; the Thirst is small, the Urine white or thin and watery, or thick and troubled, the Feaver generally lasteth eighteen hours, and sometimes with vomiting of Flegm. It is a Feaver from Flegm putrefying in the Meseraick Veins, afflicting the Sick with every day a new Fit. The Antecedent Signs, are a Flegmatick dyet and course of Living, and a perfect Flegmatick habit of body: The Signs consequent are, the Diurnal return of the Fit, which oftentimes is in the Night time, a cold and shaking fit assailing first, which when removed a burning Fit follows, but not with excessive heat when it has dispersed it self through the body; the Urine is at first white, thin and rude, but when the matter is a little digested, thick, troubled, and sometimes red; the Pulse is very small, soft and slow.

VIII. *Febris Tertiana intermitiens*, an intermitting Tertian, is either exquisite, when Choler is only putrified or Bastardly, when Flegm is also putrified therewith: it cometh every other day with vehement cold rigour, as

though the Sick were pricked; the Pulse is equal, and anon a violent Heat increaseth, with great thirst, and sometimes vomiting of Choler with subruf urine. Or thus, It is a Feaver arising from Excrementitious Choler, putrifying in the Meseraick Veins, afflicting every third day with a Cold shaking fit, which is followed with a hot Fit and other Symptoms. The Pulse is at the first beginning of the Fit small and slow, afterwards frequent, and the Urine reddish. The kinds are three, Exquisite, Spurious and Pernicious. 1. In the Exquisite, the shaking coldness at the first coming is vehement and sharp; the heat and burning in the hot fit is also violent and strong, spreading it self over the whole body in the height of the Fit; and towards the end of the hot fit, the whole body is in a gentle sweat: the Pulse at the first is small and slow, afterwards vehement and strong, swift and a little hard: The Urine is reddish and yellowish of a middle consistency, with a white Cloud in the first Fit, and then the Ague lasts not above the fourth fit, the Color arises from Choler regurgitating into the first passages; sometimes it is green, from green Choler bred in the Stomach and Veins: Lastly, it terminates either by Sweat or Vomit and Stool, and lasts not above 12 hours, and, as some think, returns not above seven times. 2. In the Spurious or Bastard Tertian, the heat is milder, nor is it diffused through the whole body, neither does it terminate by Vomit or Sweat: The Pulse is at first hard and

and the hardness encreasing to the seventh day, then it grows more soft, and the Urine is better digested: the fit lasts many times eighteen hours, and the Disease sometimes to the Twentieth day or more. It is caused of Choler mixed with Melancholy or Flegm, and joyned in good quantity with the Blood in the Vena Cava. 3. Pernicious, when either the humor that ought to be evacuated, falls upon some principal part; Or, is too thin and putrid, causing often swoonings, and great sweats without any ease to the Patient; Or, becomes adust, from the excessive burning heat, wherein the Tongue is rough, the thirst unquenchable, the eyes hollow, spirits waste; Urine red and fiery, Stools Cholerick, and sweat little; Or, being thick, is melted by heat, and settles in some particular Member, in the declination of which sweat issues from the Navel to the head; Or is joyned with some Pestilential malignity; Or draws the Womb or other Bowels into Consent, from whence (the humors being moved) a sad and dangerous Catarrh, Phthisick, Pleurisy, or Gout, is caused.

IX. *Febris Quartana intermit- tens*, an intermetting Quartane, is accompanied with vehement Cold, as if it would nip and break the Bones, the Pulse is slow in the beginning of the Fit; and afterwards the Melancholy Humour by little and little is inflamed, whence comes a burning or hot Fit: the Urine is white thin and watery, with two days intermission each Fit.

It is a Feaver arising from Me-

lancholy Blood in the Meseraick Veins, which returns every fourth day: the Sick has reachings and yawnings, with a shaking fit after, at first small, but afterwards extream, yet not so much pricking, as beating and bruising as it were; the hot fit comes by degrees, because of the thicknes of the matter, but when it is at the height it is extream; the Pulse is slow and weak, but in the Vigor of the fit swift, and stronger. The Urine at first is thin and watery, but afterwards more colored and thick. Sweating is at first small, but afterwards more plentiful. The Cause is Melancholy, as aforesaid, putrefied in the Meseraick Veins, about the Spleen and adjacent Viscera, arising from Melancholy Causes. The Differences. 1. One kind comes from natural Melancholy: Another from adust humors, known by a decay of Appetite, great thirst, head-ach, and redness of Urine. 2. One comes of it self without other Diseases aforesaid; Another follows other Diseases. 3. One sort is gentle; Another dangerous, when on the fourth day the fit returns with weakness the Urine being exceeding red and troubled.

X. *A Compound Quotidian Ague*. It is a double Quotidian, and returns twice in twenty four hours, with coldness of the Extream parts, but there is wont to be no shivering fit, or but very little; the Symptoms are otherwise the same as in a Simple quotidian: and the Cause also the same, but reduplicate.

XI. *A Compound Tertian*. It is that which is complicate with a Quotidian and Tertian, and it

is twofold either a Semi Tertian, Or a double Tertian. A Semi Tertian is either. 1. *Exquisite*, in which Choler and Flegm equally abound, which is made of an Intermitting Tertian joyned with a continual Quotidian, which vexes continually, but the Third day with a Shaking fit; it is known by the Signs of both Feavers; the Urine is crude, thin, and without Color, sometimes troubled, with no Sediment, or such as signifies no good; the Pulses are swift and unequal: It is caused from Choler putrifying without, and Flegm putrifying within the Vessels, joyned most commonly with an Inflammation of some of the Bowels. By Hippocrates, it is called *Horifica*, the Shaking Ague, causing a shaking not only at the first coming of the fit, but in the whole course of the Disease, especially in the beginning and augmentation, two fits being met and joyned in one. 2. Or *Spurious*, which consists of an Intermitting Quotidian joyned with a continual Tertian; wherein either Choler or Flegm most abounds: if Choler, there are more Symptoms of a Tertian; if Flegm abounds, more of a Quotidian. And so if Choler abounds most, the Feaver is more horrid, and sometimes has a shaking fit with it; it is also more fervent, and Choler is voided by Vomit, Stool, or Sweat: But if Flegm abounds most, a vehement Cold afflicts the extreame parts, with some few shiverings; the fit is longer before it grows to its

height, and remains in its height a long time, yet causes no great Thirst or Burning, but sometimes with an Inflammation of some *Viscera* or Bowels, as Stomach, Liver, Spleen, or parts adjacent, which is caused when Feaverish matter is thrust thither with the Blood. 3. A double Tertian, is that which comes either once or twice a day, arising from Choler putrifying in two places of the *Meferaick* Veins. In the daily return of the fit, it seems not to differ from a Quotidian, yet are they known one from another by their proper Signs, shewing the abundance of Choler or Flegm in the Patient. The humors causing Tertian Agues are gathered together chiefly in the Liver, Gall, Stomach, Mesentery, Pancras, or in the Veins of those parts. Authors make mention of a Triple Tertian, causing three fits in two days, but it is a Feaver very rare, or seldom seen, and less easy to be discovered, although the Physician has Argus's Eyes.

XII. A Compound Quartan. It is either double in which the fit leaves one day free, and comes the next two days following: Or Triple, in which the Paroxysm returns every day, as in a Quotidian and double Tertian: Now these Double and Triple Quartans come of Melancholy putrifying in divers parts of the Body. They are distinguished from the Exquisite, or Single Quartan, because in these Complicate, the heat, thirst, Watchings and other Symptoms are more Vehement: the

N Sim-

Simple begins of it self without any other Feaver going before ; the *Complicate* succeeds the *Single* ; that is a *double* succeeds the *single* ; a *Triple*, the *double* : Moreover a *double Quartan* is easily known by the *Courte* of the *firs* : A *Triple Quartan* is distinguished, from a *Quotidian*, and *double Tertian*, not only by *Signs* of *Melancholy* abounding, and by the *form* of the *firs*, but also because it was first a *single* or *double Quartan*, before it was a *Triple* ; for a *Double* or *Triple Quartan*, are truly *Simple Quartans* degenerated.

XIII. *Febris Hectica Simplex*, A *Simple Hectick* Feaver, is an unnatural Heat not only kindled in the *Spirits* and *Humours*, but also in the *fleshy* and *solid parts* : it is without *Pain* or *Heat*, the *Sick* cannot perceive he hath a Feaver ; the *Urine* is at first like one in health, afterwards it is thin, crude, white, or pale, at last, oyle on the top ; there is a dry Cough, a swift and great Pulse ; Heat in this Feaver causes no pain at first, because it is weak, and the *Vapors* raised by it are small, so that the wasting seems to be *Insensible* ; but afterwards it is *Biting*, because of the *Solidity* of parts. An hour or two after Meals, 'tis augmented, because of the *humectation* of the dry and *Solid parts* ; 'tis without compression, without horror, and rigor with a great and swift Pulse, the *Meat* being distributed the heat seems to cease. This Feaver by degrees dries up all the *Radical moisture*,

consumes the *Secondary humors* and melts all the fat in the *Body*. It is caused either by some other preceeding long and burning Feaver ; Or from *Diseases* of the *Breſt*, *Stomach*, *Liver*, *Spleen*, *Kidnies*, *Diaphragma*, and chiefly of the *Heart* : The *External* cause may be from violent *Exercise*, *Sun*, or *Fire*, hot and dry food, which vehemently heat the *Body*, immoderate evacuations, as loofness, bloody flux, strong passions of the *Mind*, and lastly all these things meeting in a *Cholerick* *Body*, or one of a hot and dry *Constitution*. It commonly befalls such men as are given to drink much *Wine*, and use hot *Spices*, which breeds a certain filthy *Blood* in their *Liver*, by which the *Substance* thereof is *Corrupted* : *Fernelius* saith, it is a sign of this Feaver when the *Sick* exceedingly covet *Wine*, but abhor all kind of *flesh*. This Feaver hardly extenuates the *Body*, yet it inflames the greatest part of its *humidity*, consumes and dries it : Moreover a *Simple Hectick* is continual, without any fits, always alike, neither increasing nor decreasing, save it is a little augmented an hour or two after meat ; the sick perceives not any Feaver, but are lazy and loth to stir, and when they do, it is with pain. The *Differences*. It is either *Simple* and without a *Consumption* (the derry moisture only wasting) of which, all that we have said is intended : Or *Complicate*, when it is joyned with some other putrid Feaver either continual or intermittent.

XIV. *Marasmodes*. *Hectica Marasmodes*, A *Hectick* with a *Consumption*, wherein there is an

an evident extenuation of the Body, the fat and fleshy Substance thereof perishing, after the wasting of the aforesaid dewy Moisture. The Sick perceives no Feaverishness only some small alteration after Meals, there is an apparent dryness, a smaller and swifter Pulse, with a certain hardness: then the Body grows lean, the Temples fall, the Palms of the Hands and Soles of the Feet are hot; The Stools have a greasy Substance mixt with them: An oily Substance is voided by Urine which swims at the top, not much at once, as in persons of good constitutions; nor with pain of the Kidnies, as in melting of the fat of the Kidnies; but slowly, and a little at a time; the Sediment of the Urine is like to Bran or Meal, without any Disease in the Bladder, which is a Sign that the Substance of the Body does Melt; there is also a Swelling of the Thighs, and a Looseness.

XV. *Marasmus*, An Hectick with a Consumption of all the solid parts of the Body, where besides the Radical Moisture, humors, fat and fleshy parts of the Fibrous and Membranous substance is violated, melted and consumed; viz. those parts which constitute the habit of the Body, and are commonly called *Spermatical*, in regard of which it is more rooted and fixt than other Feavers which are only in the Spirits or humors. *This Feaver is termed Habitual, because it is scarcely to be removed*

from the subject, having its Seat in the whole Body, and its Center in the Heart. Moreover this Feaver contains the state of a Hectick, and its last Age, for it never comes to a declination; because it comes to a degree wherein it is said to be incurable; for the fibrous and membranous substances being consumed, the whole Body is so extenuated, that the face of the Sick is like that mentioned by Hippocrates, nothing but skin and bone, the Stomach is drawn-in almost to the Ribs, the Eyes are hollow, dry, and with thick Excrements in them, the nose sharp, cheek-bones and other bones evidently stick out, Hairs fall, the lively colour of the face is extinguished, and becomes livid, or of a lead Color, the whole skin is dry, the Jaws appear, the Diaphragma or Midriff is so contracted, that the Sick seems to have no Guts, the Pulse may be perceived under the Stomach, and lastly, through this Universal Consumption of the whole and of all its parts, the sick creature has in a manner, the very appearance of a Ghost, being accompanied with cold and dryness.

XVI. *Morbilli*, *Sudamina*, *Rubella*, The Measles; They are small red Pustles breaking forth upon the Skin with a continual Feaver, caused by the expulsive faculty and a peculiar Ebullition or fermentation of the blood. They commonly afflict the whole Body from head to foot, and are accompanied with all the Symptoms of a continual Feaver, arising from a Choleric matter restrained and a certain

Impurity in the Mothers Blood: Now for as much as the Blood is said to have a two fold Excrement, viz: one thin, the other thick: from the thin, Excrement proceeds the Measles; from the Thick, the Small Pox; which excrements are cast forth by an Ebullition or Effervescence in the Blood, which Effervescence, according to Avicenna's Doctrine, is two fold, the one Perfective or depurative, in which only the impurer parts of the Blood are by nature cast forth, that the whole mass may afterwards remain pure: The other Corruptive, in which not only the Excrementitious parts of the Blood are cast forth, but the pure Blood also it self is putrefied, whence the Measles or Small Pox become dangerous and deadly: And according as this putrefaction is more or less, so also is the danger greater or lesser: This Corruptive fermentation chiefly happens when these Diseases are Epidemical, being so made by a malignant constitution either of the Air or of the Heavens. See Cap. 48. Sect. 20. abovegoing.

XVII. Exanthemata, Ecthy-mata, Variolæ, The Small Pox. They are small Pustles breaking forth upon the Surface of the Body by means of the expulsive faculty, and a peculiar fermentation of the Blood causing a strong violent and continual Fever. When the Small Pox are present they are known by sight, being Whelks almost like unto Warts some bigger some lesser. But Signs of the Disease at hand are a pain in the Head with

a pulsation of the Forehead and Temples, great sleepiness and terror in Sleep; difficulty in Breathing, heat, redness, and sense of pricking over the whole Body; pain of the Back, which sometimes alone, or appearing with other Symptoms in a Synochus putrida foreshews the Small Pox; for that through the back are carried the great Vein and Arterie in which the Malignant blood fermenting or boiling, does send forth a sharp Effervescency to the Nerves and adjacent Membranes, from whence it is that pains are especially felt in those parts: there is great Anxiety and Unquietness heaviness of the Eyes, with shining before them, and tears flowing from them without Cause; itching of the Eyes and Nostrils, swelling of the Face with some redness, Trembling of the Feet when the Sick turns, frequent sneezing, yawning, hoarseness, coughs, painting of the Heart, Urine almost like that in Health full bodies, because of the Morbid sick matter is driven to the outward parts, spots coming out, and a continual Fever from the Ebullition of the Blood and humors, a Vehemency of all these Symptoms at first: if you find the Disease is very malignant, and Epidemick withal, it is then generally accompanied with Ravings, Dotage, Trembling, Convulsions, Frensy, and other eminent tokens of danger, all which are caused either by the violent fermentation of the blood, sending many thick, ful-

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ginous and malign Vapors to the Head, *Diaphragma*, and other parts: Or by a fluxion caused by the extream heat, which dissolves the humors in the Brain. The Original Cause is the Radical Impurity of the Mothers Blood which the Infant in the Womb attracts; which blood being drawn by the Child, invests or imbibes the whole fleshy Substance, and lyes for some years dormant or insensibly hidden: but at length meeting with matter causing it to agitate and ferment, it begins to work like new Wine or Beer, by means of which fermentation, the pure is separated from the Impure, which is now cast forth by a certain kind of Crisis. There are other kinds of Pustles called *Crytalli*, *Crystalls*, which Country people call *Swine Pox* and *Hen Pox*, like the former in fashion and size, but herein they differ, in that the *Small Pox* begin with redness and inflammation; but these are white without Inflammation, about the bigness of *Lupins*, and as it were *Bladders* full of a shining, thin, wheyish humor, which in about three or four days time break and dry up; they are generally without danger, and commonly break forth without a Fever. Lastly, when the *Small Pox* appear with great malignity they commonly at their going away leave some of these Symptoms behind them, viz. either an *Epilepsy*, or *Convulsion*, or *Dysentery*, or *Hæmorrhoids*, or hard Swellings, or External Ulcers, concerning which see their proper places. See Cap. 55. Sect.

5. XVIII. *Febris Purpurea*, *Febris*

petechialis, *febris peticularis*, the Spotted Fever, is a continu malignant burning Fever, the Sick being afflicted with excessive Heat, Thirst, Watchings Pains in the Head and Faintings: having after few days Spots (called *petechiæ*, *peticula*, *lenticula puncticula*) coming out, sometimes all over the body, and sometimes only in one part, being small and of a reddish, purplish, livid, leaden, or sometimes black Colour. The Signs are the same as in other malignant Fevers; the Spots are without any Itching, extubérance, or exulceration; appearing chiefly in the back, neck, arms, breast, thighs, and those other places, where the most eminent Veins and Arteries do pass. They are seldom seen in the face, because the Cold of the Ambient Air repels the matter thence. They are distinguished from *Flea bitings*, because they have no prick in the middle of them: they are caused from the thinner part of the putrid humor, which is the reason they so soon vanish: they are expelled by the expulsive faculty, for that they generally appear at the beginning; seldom Critically, always or for the most part Symptomatically; and by how much they are the more in number, by so much the more do they signify, the great abundance of putrid and malign matter. The Differences. 1. From the Quantity or number, in some there are many, in others few. 2. From the Quantity or Magnitude, some are great, others are small. 3. From the Color, some are Red, from putrid Blood; others Yellow and

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Green

Green from Choler; others of a Pomegranate, or black Color, from Melancholy.

XIX *Morbus Hungaricus Febris Militaris*, The Hungarian Disease, Calenture, Camp Feaver, or Soldiers Sickness, because it had its Original among Soldiers in the Camp or at Sea. It is a continual, putrid, malignant, and contagious Feaver, arising from a fermentation of many evil humors about the Stomach and first passages, caused by an unnatural and violent heat, joyned with a contagious Air. It is known by all the signs of a malignant Feaver, loss of Strength without any apparent Cause, Faintings and sometimes Swoonings, loss of appetite, pain of the Joynts, fullness and hardness of the Stomach, under the *Cartilage, Mucronata*, noise in the ears, breathing difficult frequent Vomitings, Pulse sometimes weak and quick, sometimes unequal and strong, Ravings, which ceasing, and, the matter turning to the Ears, causes Deafness; sometimes also spots appear, many, large, and of various colors as in a spotted Feaver; to which add the singular or special Sign of this Disease, which is vehement and extreame pain of the head, causing the Sick to Rave and almost go Distracted. The Cause is corruption and putrefaction of the Blood and humours in the *Vena Cava*, arising from a putrid heat or Contagious Air: the first is caused by an irregular and rough dyer, Gluttony, Drunkenness, sunbathing, &c. the other from Venomous Vapours arising from the

Earth and infecting the Air with Poyson and Contagion.

XX *Sudor Anglicus*, The Sweating Sickness, or English Feaver. It was a dangerous malignant Feaver accompanied with headache, restlessness, fainting and a plentiful and perpetual sweating; peculiar to our Countrymen, and for the most part mortal. *Sennertus* saith, Those who were taken with this Disease presently died, without long anguishing, a Bubo, Carbuncle, or Pimples; for the Disease being violent, about the beginning of its assault, before the Feaver seems to be enkindled, there is presently an unwonted Languor, defection of mind, overthrow of Strength, pain of the head, inquietness, palpitation of the heart, a quick and unequal pulse, with other nervous kind of affections, and an abundant and great Flux of Sweat, which perpetually afflicted the Sick till the Disease was at an end, which commonly terminated in 24 hours. The Cause of this affect, as the Learned *Willis* conceives, was originally in the Nerves or Nervous juyce, and from thence communicated to the Blood, whilst it performed the Tragedy of that malignant *Ephidrosis*. For this humor watering all the Fibres of the whole body, and being the Vehicle in all places of the Animal Spirits, it by leaving its due Crasis, viz. its Volatile and Saline Spirits, degenerates, corrupts and becomes depraved, acquiring a malignant, poysonous and contagious property, which being irritated flows back into the sanguinous Mass

Mafs, which by reason of its so very great malignant and pestilent quality, empoisons at the very first touch, the whole mass of Blood; which being presently dissolved in its Crasis, dissolves its joyning, and jues it into Serofities, which that it might be quickly expelled, excites Nature to that great eccrinnick Effervescency, whence copious and plentiful sweats break forth, even at the first assaulting of the Disease, Nature not being willing that so pestilent an Enemy should have any time allowed it, whereby it might be intimately mingled with the Blood; for otherwise were it permitted to stay in the Bloody Mass for but a few hours, and to Circulate, and be thoroughly mixed with it, it would wholly corrupt & plainly mortify it. Hence it came to pass, that if perchance by this secretion all the venomous particles were immediately driven forth, the sick presently (in 24 hours space) recovered, and the Disease terminated in Health, whereas otherwise Death certainly ensued. This Disease began in the days of Henry the Seventh, King of England, Anno 1485. about the beginning of August, and lasted to the end of October. Now although Sennertus saith, that this malignant sweat was subject to our Nation of England, continually for the space of 40 years, yet our own Countrey-men, both Physicians and Historians, who lived in or near those times, affirm that it had perfect and great intervals, returning only 4 times in the space of 66 Years, viz. 1506. 1517. 1528. 1551. and that it scarcely raged above six months at any time, there always

a wet season going before it. But in some of those times wherein it was Epidemical, it made every where great slaughter, and that in some places (in all the times of its reign) the third part of the people were found wanting. So great was its malignity that as soon as it invaded any Town or City, it took away five or six hundred, scarcely sparing an hundred of all that fell sick. See Sennertus de febris, Lib. 4. cap. 15.

XXI. Pestis, the Plague or Pestilence, is a continual malignant burning Feaver proceeding of Putrefaction: they who are infected are cold without, hot within, are heavy, weary and lumpish; have great Pain in the Head, Carelessness and Sadness of the Mind, with Stupor, loss of Appetite, Thirst, Vomiting, Bitterness and Dryness of the Mouth Pulse frequent small and deep. Urine thick and stinking with Bubo's behind the Ears, under the Arm holes, or in the Groin, or Carbuncles, or blew, reddish, black or livid Spots: in the height of the Disease there is a manifest and violent Feaver, with great Watching. The Plague or Pestilence is a continual and Epidemick Feaver, wherein there is an inflammation and putrefaction of spirits and humours, and that both within and without the Vessels, joyned with Malignity and Contagion, which afflicting the heart and all the Vital faculties, with a heap of poisonous and malignant Symptoms suddenly kills. If the putrefaction be small, or almost none at all, and the malignity great, or in a very high degree

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gree ; then is the Feaver wondrous gentle, and without any bad Symptoms, but the Vital faculties are much afflicted, the strength of the Sick more than ordinarily weakened, and the Disease indeed very mortal : the contrary when the putrefaction is great, and the malignity small. But if both putrefaction and malignity are excessive, Death approaches without remedy. *The Symptoms of Putrefaction and the Feaver*, are such as are common to all other burning Feavers : as head aches, burnings, watchings, raving, dead or troublesome sleeps, sickness at Stomach, vomiting, loss of Appetite, fainting, swooning, hiccough, restlessness, looseness, sweating, and such like. *The Symptoms of Malignity and Contagion*, are principally three ; first, a pestilent Bubo : secondly, a Carbuncle : thirdly, the Plague Spots, black, blew, or livid, which sometimes have a little kind of hardness in them. Hence appears the Error of many Physicians, who presaged life to their Patients because of the absence or gentleness of the Febrile symptoms, when Death was at the Door ; the Patient seeming well, talking heartily, and to appearance ailing nothing, yet within 2 or 3 hours after, have dyed with all the Symptoms of Malignancy and Contagion upon them ; all which I can affirm from mine own experience, who was an eyewitness hereof, during the whole last great plague in London, Anno 1665, in which died more than an Hundred Thousand, and sometimes between Eight and Nine Thousand

a Week. My constant visiting and viewing the Sick, even some Thousands of them, through the whole course of that Plague, has given me a more experimental knowledge of that Disease, than all that ever I learned from any Author or Tutor whatsoever. The three Symptoms of Malignity before named, chiefly the last, declare the malignant, venomous and contagious quality to be in the highest Degree. *The Causes of a Plague or Pestilence are twofold, viz. either External or Internal. The External Causes are the six non-natural things, among which the Air does hold the chiefest place. Now the Air becomes vitiated or Contagious.* 1. For want of being purified with wholesome Winds, from whence Hippocrates describing a Pestilential Constitution, saith, That Year had no Winds. 2. From the Infection of putrid, stinking and noisome exhalations, arising from Cadaverous or dead Carcasses, slain in Battel and left unburied : stinking lakes, pools, fish ponds, standing waters, jakes, privies, dung-hills, earthquakes, out of which sometimes a contagious Air arises. 3. From the Irregularity of the first qualities, when it is either too hot or too cold, too moist, or too dry ; or when the heat, coldness, moisture or dryness happens unseasonably, or out of its proper time ; as heat in Winter and cold in Summer, &c. 4. From the Influences of Heaven, as the appearance of Comets, the major and minor Conjunctions and Oppositions of the Superiors, Saturn, Jupiter and Mars, in the Ascendent of any

Kingdom or Countrey, Eclipses of the Luminaries, and other ill Configurations of the Cælestial bodies, and all these chiefly happening in the Sixth, Eighth or Twelfth Houses of the Revolution of the World. Now the Superiour bodies or Stars act upon inferiour bodies in a threefold manner, to wit, by motion, light and influence: By motion, they cause an alteration of the first qualities both of the Air and other sublunary things: By light, they cause an Alteration of the second qualities, and a Resolution or Confirmation of the principles of Destruction or Preservation: By Influence, they cause not only an alteration of the first and second qualities, but also an exagitation of the Spirits, with various, hidden and occult qualities, from whence arises Putrefaction and Contagion; And this is that Divine principle in diseases which Hippocrates acknowledges, and Galen expounded to be in the Air, but is produced by the Cælestial bodies and hidden Causes: The other five non-naturals are altered to evil, from the evil qualities and contagion of the Air; and so may be said to be with the Air conjunct and adjunct external causes of the Plague. The internal Causes are taken 1. From a Plethory, Gluttony, drunkenness, and surfeiting. 2. From a Cacochymy, or a repletion of evil juices through a bad dyer, or a preposterous use of the six non-natural things. 3. From Passions of the mind, or too immoderate Coition; for the first do distract and draw away the Spirits from their proper operations; the other weakens all the powers of the body, and dissipates the Spirits, by which the humours are agitated

in the Body, their nature changed, and their Substance corrupted, by which means a Pestilential Seminary is stirred up, and implanted in the heart.

XXII. A Continual Symptomatical Feaver, It is a Feaver following upon other Diseases, which Diseases being removed, the said Feaver ceases. The differences. 1. One sort is that called Lipyrias, arising from some great Inflammation or Erysipelas of some Internal part, chiefly the Stomach, the Blood and Spirits, having recourse to the part inflamed, wherein, during the whole course of the Disease, the inner parts are as it were burnt up with heat, while in the mean season the outward parts are cold. 2. Another which arises from the Corruption and putrefaction of some Bowels, chiefly in the putrefaction of the Lungs, in Fistula's that pierce deep into the Omentum, Mesentery, Womb, &c. from whence putrid vapors are communicated by the Veins inserted into the heart, heating and inflaming the same. 3. Another Anomalous or irregular, arising from putrefaction of matter thrust forth of the Vessels into the substance of some Bowel, or at least fixed fast in the Capillary Veins, which are dispersed through the Substance of the Bowels, and putrefying the same: It afflicts with a gentle heat, has Signs of putrefaction in the Urine and Pulse, makes the Patient so weak, that he can hardly stir on his Legs, yet is not burthenfom by any grievous Symptom; the body pines away by little and little, and it

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is continued beyond the fourth day. The vapours in this are not conveyed to the heart in such great plenty as in other Feavers. 4. Another arises from corrupt Milk, and is common to Infants: Or, from Blood putrifying in some parts without the Vessels;

Or, from Worms; Or, from Crudity upon greedy eating, commonly called a Surfeit; it is accompanied with Tumor and Inflammation of the Hypochondria, from whence putrid vapors, are communicated to the heart.

Libri Primi F I N I S.

SYNOPSIS MEDICINÆ. PROGNOSTICA.

Shewing

*How to judge and foresee the Issue of
Diseases ; whether long or short,
curable or not, or whether they may
end in Life or Death.*

Generally and specially performed :

First, From the Decumbiture and Radix, Simply
considered in themselves , or Comparatively
in their Critical and Judicative Times, Di-
rections, Transits, and Revolutions.

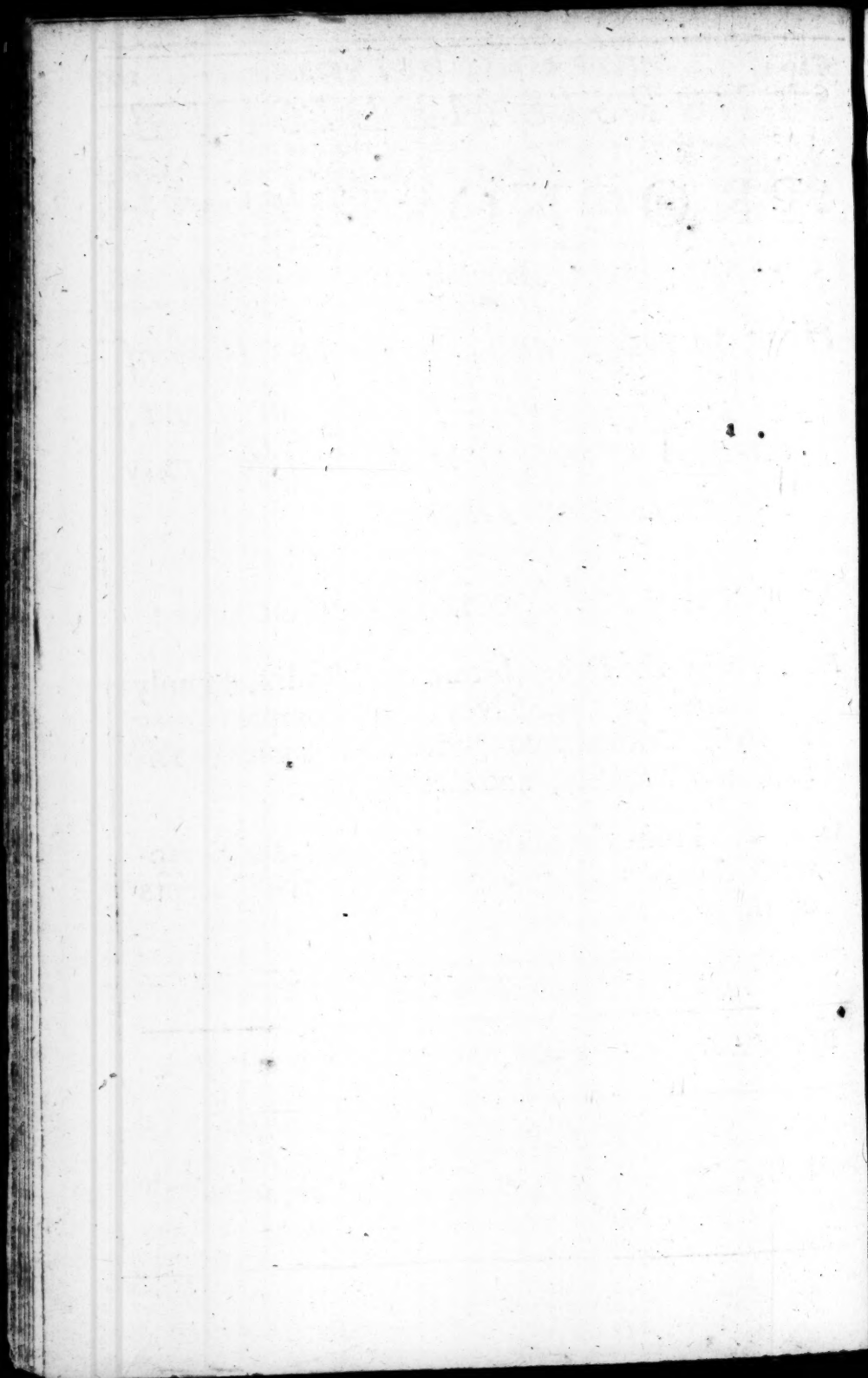
Secondly, From the Body of the Sick. and Symp-
toms thence arising, according to the Precepts
of *Hippocrates*.

Liber Secundus.

By WILLIAM SALMON, Professor of Physick.

L O N D O N,

Printed by *Thomas Dawks*, at the blew Anchor, at the West
End of *St. Pauls*, 1679.





SYNOPSIS MEDICINÆ.

LIBER. II.

PROGNOSTICA.

CHAP. I.

Of the Decumbiture.

I. **T**HAT Moment of Time is to be taken for the Decumbiture, in which there is a certain Manifestation of the Disease, that is, when it sensibly appears, either with a Horror or Trembling, or that the Sick is forced to take his Bed.

Exempli Gratiâ, *The Prodromos of a Feaver, is Pain and Inflammation of the Head, with unequal Pulse, it may be some daies before, this is not the Feaver, but its Messenger: the time of the Decumbiture is when it manifests it self in its Colors, and the sick can no longer hold up.*

II. The more acute a Disease is, the more manifest to Sense is the time of the Decumbiture :

the more chronick, the more difficult.

In this case, if the true time cannot be attained, that must be accepted, which is, when the Physician first views the Patient or his Urine.

III. To the true time of the Decumbiture, or first sight of the Patient, or his Urine, draw a Celestial Scheme, and exactly rectifie the Moons place, if the Disease be acute ; but the Suns, if the Disease be chronick.

IV. In all Prognosticks, consider principally, first, the Ascendent, its Lord, and the Moon: secondly, the *Imum Cali* and its Lord: thirdly, the eighth House and its Lord.

V. If the Moon be void of Course at the beginning of a Di-

Disease, consider with her then more especially the Sign ascending : but if not, and she be angular, and in the Ascendent, judge by her alone, but if not in the Ascendent, joyn with her in Judgment the Lord of the Ascendent.

VI. Always consider that *fixed Stars* of the first, second, or third Magnitude ; near the Ascendent, its Lord, or the

Moon, and to what Stars the Moon applies are of great force.

VII. Lastly, Whatsoever we have said of the Lords of the Ascendent, fourth, or eighth, may hereafter more especially be considered of, and applied to those Planets or Stars, which shall be really posited near the Cusps of those Places, or Houses.

CHAP. II.

Of Sympathy and Antipathy of Significators.

I. Signs of one and the same Triplicity sympathise one with another, and such as are in Sextile Aspect : *as Diurnal with Diurnal, and contrariwise.*

II. Planets are friendly, or sympathise essentially one with another ; first when their Houses are in *Sextile* or *Trine* : secondly when their Temperatures or Qualities agree ; and contrariwise.

Thus Mars is a friend to Mercury, and sympathiseth in Dryness : Venus to the Moon, &c. but Saturn is an enemy to both the Luminaries. Secondly Mars is a friend to Sol ; Saturn to Mercury ; Venus to the Moon, & contra ; Saturn is an Enemy to Jupiter ; Mars to Venus, &c. he being hot and dry, she cold and moist.

III. Planets have an acciden-

tal Sympathy, when they are in *Sextile* or *Trine* one with another, or being of one Nature are in *Conjunction* : (for otherwise the more ponderous oppresses the lighter) & *vice versa*.

IV. Elements sympathise by passive Qualities, for heat is joyned with dryness or moisture : and so is cold.

So fiery Signs are hot and dry, and actively sympathize with fiery Signs by heat and dryness (hence the *Trine* :) and passively with airy by heat and moisture (hence the *Sextile* :) from whence, as much as active Qualities exceed passive, so much the *Trine* exceeds the *Sextile* in Power. Therefore,

V. Aspects are either friendly or inimical to Significators, and consequently to the Sick, thereby either remitting or exciting the

the Disease, according as the Aspect, is either good or evil, by Sect. 2, 3, 6, 7, 13, Chap. 5. lib. 1.

VI. An *Opposition* is bad, because Planets then openly oppose one another: a *Quartile* is bad because the Signs differ by Opposition in active or passive qualities, and sometimes in both active and passive, the *Sextile* is

good, because the Signs are of the same active Qualities: the *Trine* is very good, because the Signs in *Trine* are the same, both in active and passive Qualities: (*and this is the reason a Trine is better than a Sextile*;) A Conjunction of *Sol* with any Planet, (except *Mercury* who is almost always Combust) is very bad.

CHAP. III.

General Prognosticks from the Decumbiture.

I. IF the Moon at the Decumbiture, be with fixed Stars, of the first, second or third Magnitude (near the Ecliptick) the Disease is generally of the Nature of that Star.

II. If the *Moon* be in Conjunction with a Retrograde Planet, the Sick will Vomit; in Conjunction with *Saturn* having North Latitude, the Sick will be much bound in body.

III. If *Saturn* prove Retrograde when he comes to Opposition of *Sol*, the Sick will fall into a Relapse.

IV. If *Luna* be in a Sign, of the Nature of the peccant Humour, it is a very bad Sign: if she goes out of one Sign, into another, the Disease suddenly changes.

V. When the Disease proceeds

of Plenitude upon a Full Moon: or of Emptiness, upon a New Moon, it is very dangerous, if not mortal.

VI. If *Luna* be in a moveable Sign, the Disease soon ends in Health or Death: in fixed Signs, she prolongs the Disease: in common, she makes an acute Disease turn chronick.

VII. A good Planet in a bad place afflicts the Humour he governs.

VIII. *Mercury* in Signification is various, according as he is posited and aspected: with the Fortunes he is a Fortune, and contrariwise.

IX. A Fortune in the seventh, shews a good Physician, an Infortune the contrary.

X. A Fortune in the tenth, shews good and proper Medicine: and in the fourth, it shews

a good and speedy end of the Sickneſs.

XI. *Jupiter* helps moſt in cold Diſeaſes; *Venus* in hot, if the Diſeaſe proceed of Emptineſs: but *Saturn* moſt in hot; *Mars* moſt in cold, if of Fulneſs.

XII. The *Conjunction*, *Sextile* or *Trine* of *Jupiter* or *Venus* (if they rule not evil Houſes) ſoon cure the Sick: and their *Quarile* or *Oppoſition* are better than the *Sextile* or *Trine* of *Saturn* or *Mars*, unleſs they be Lords of the *Ascendent*.

XIII. Benevolents in the fixth, cures the Sick with much facility; but Malevolents change it from better to worſe.

XIV. If the *Ascendent*, the Light of time, and their Lords, be afflicted by a malevolent, or the Lords of Death, or be in the fourth or eighth (and the Benevolents aſſiſt not) Death is to be feared.

XV. But if the ſaid Significators be not afflicted or impeded as aforeſaid, there is no fear of Death: And if they be ſtrong, Health will ſuddainly come.

XVI. *Saturn* gives long ſickneſs: *Sol*, *Jupiter* and *Venus* mean: *Mars* ſhort: *Mercury* according as he is configurated: *Luna* ſuch as often return by Fits, as Agues, Falling-ſickneſs, &c. but *Mars* ſhorteſt of all.

XVII. Conſider the Age, for old Age brings longer Sickneſs than Yourh: the Seaſon, for Winter brings longer Sickneſs than Summer: the Complexion, for Melancholy retains a

Sickneſs longer than Choler: the Planet, for *Saturn* gives longer Sickneſs than *Mars*: the Sign, for fixed ſhew tedious Diſeaſes: the Houſe, for Angles ſhew Swiftneſs, Cadents long Sickneſs.

XVIII. And whatſoever we have ſaid, or may ſay, of the Moon in acute Diſeaſes hereafter, is (as true and ought) to be underſtood in like manner of the Sun in Chronick.

XIX. The Significators of the Diſeaſe in double bodied Signs ſignify a Relapſe, or that it will change into ſome other Diſtemper.

XX. The Diſeaſe is deſperate when the Significator of the Sick in the Nativity or Decumbiture has any Dignities in the VIII or IV Houſes.

XXI. The Lord of the *Ascendent*, *Sol* or *Luna* or any two of them, in the laſt degree of *Taurus*, *Virgo* or *Capricorn*, and forthwith entring into *Gemini*, *Libra*, or *Aquary*, it ſhews increaſe of Blood, a dangerous flux of the Terms, Bloody flux, bleeding at Noſe, or a Pleuriſy.

XXII. If they be in the laſt degrees of *Gemini*, *Libra*, or *Aquarius* and immediately entering *Cancer*, *Scorpio*, or *Piſces*, it ſhews a dangerous Catarrh, flux or Lask, Vomiting, Whites, and involuntary piſſing.

XXIII. The Moon going from a Superiour Planet to an Inferiour; ſhews a decreaſe of the Diſeaſe: but if ſhe goes from an Inferiour Planet to a Superiour, it ſhews a continuance

ance and increafe of the Disease.

XXIV. If it be a young Married Woman that is Sick, and apply to the *Conjunction, Sextile, Quartile, Trine* or *Opposition* of *Venus* in the Ascendent or Sign Ascending, it signifies she is with Child; this more especially if she separate from the Lord of the Fifth.

XXV. The L. of the VI. or Planet in the VI. Retrograde, it is a sign that the Disease will return again; or, if it was a wound or Ulcer healed, that it will break out again: If he be in a fixed Sign, or be slow in Motion, it argues length of the Disease: So also if the Cusps of the VI and Lord thereof be in Common or by-corporeal Signs.

XXVI. You are also to regard the fixed Stars especially of the first and second Magnitude, for if any of them shall be placed in or near the Cusps of the Ascendent, IV, VI, VII, VIII, Medium Cœli, *Sol* or *Luna*, or any of their Lords; so much and more that Star doth promise or threaten, as that Planet doth, of whole Nature and Qualities it is.

XXVII. If the Dom. Ascen-

dent *Sol* or *Luna* apply to any Fortune, or any Benevolent Planet apply to them; if in the mean time it shall happen that before the Partil Conjunction or Aspect, some evil Aspect of another Planet shall intervene, and be joynd to any of them; the sick shall fall into some other Disease before he recover, or else the same shall most grievously torment him.

XXVIII. If it happen that the Significations of Life and Death be manifold, then the Judgment ought to be given on that side which has the greatest number of Testimonies.

XXIX. The Planet is of more force than the House of Heaven, and the House of Heaven is of more force than the Sign, and the Sign than the fixed Starrs.

XXX. *Luna* in Conjunction of *Mercury* is either Healthful or Mortal, according as *Mercury* is joynd to good or evil Planets.

XXXI. Infortunes in the Ascendent or VII violently afflict; in the one by their presence, in the other by opposite rays.

CHAP. IV.

Prognosticks of a short Sickness.

I. IF the Cusps of the Ascendent, or sixth, be moveable, and their Lords in moveable Signs, or the latter Degrees of a Sign, the Disease will quickly end : a common Sign generally shews a Relapse.

II. The Lord of the sixth stronger than the Lord of the Ascendent, the Disease encreases, & *contra* : but if he be a Benevolent, the Disease cannot be long.

III. The Lord of the eighth, in the sixth, and Lord of the sixth in the eighth, shew a short Sickness.

IV. The *Sextile*, *Trine*, or *Opposition* of *Jupiter* and *Venus*, with the Lord of the sixth, soon cures the Disease.

V. The *Sun*, or *Moon*, Ascendent and its Lord, being free from the Beams of the Infortunes, and aspected of the Fortunes, or angular and strong, shew short Sickness.

VI. The *Sun*, *Moon*, or Lord of the Ascendent, going out of one Sign into another, shews a suddain change : if into the Houses of the Lord of the eighth, it will be by Death : if into any other House or Sign judge accordingly.

VII. If the Lord of the Ascendent be weak, yet if he be joyn-

ed to a Fortune, there will be speedy recovery, and so much the sooner, if he be strong.

VIII. *Luna* swift in motion, and applying to the Lord of the Ascendent, by good Aspect, shews sudden Cure, if she separates not from the Lord of the eighth.

IX. If *Luna* decrease in Light and Motion ; or *Sol* apply to the *Conjunction*, *Quartile* or *Opposition* of *Saturn* or *Mars* or Lord of the eighth, the Disease will be very short, let it be in what Sign soever.

X. *Luna* or any other Significator of the Sick, joyned to a Planet direct and swift in Motion, shews a short Sickness : and the stronger she is at the Decumbiture, the better it will be for the Sick.

XI. If *Mars* signifie the Disease, it is not only very short, but also extream acute, more especially if in the Ascendent.

XII. The Lord of the Ascendent, sixth, and the Moon, or the Moon in *Conjunction*, *Sextile* or *Trine* of the Lord of the tenth, or being posited in the tenth, shews suddain cure by Medicine.

XIII. Judge of the length or shortness according to the Nature of the Disease : for as you can-

cannot judge a Consumption should be cured in three or four days; so it is impossible that an acute Fever should last three or four years.

XIV. The Ascendent, *Sol* or *Luna*, or their Lords in Angles or Succedents, swift in Motion, Direct, increasing in light and number, elevated above the Infortunes or Lords of the IV, VI, VIII or XII Houses, and well A-

spected of the Fortunes or Planets of like Nature to themselves, it shews the Disease will be quickly overcome; & *de contrario*.

XV. The Lord of the Ascendent swift, and entring into another House or Sign, the Disease will soon terminate: if it be into the IV, VIII, or XII, it ends in Death.

CHAP. V.

Prognosticks of a long Sickness.

I. IF the Lord of the Ascendent or sixth, or both, or Planets posited in the Ascendent, or sixth, be first Direct, and presently after Retrograde; or the Moon separating from a Retrograde Planet, applies to the Lord of the Ascendent, or to a Retrograde Planet, in what House of Heaven soever, it signifies a Relapse.

II. The Ascendent and sixth, being fixed Signs, or their Lords, or the Moon being in fixed Signs, the Disease will be long.

III. The beginning of a Sign upon the Cusps of the Ascendent or sixth; or their Lords, or the Moon in the beginning or middle of a fixed or common Sign, shews length of Sickness.

IV. *Saturn* Lord of the sixth,

shews a long Disease: so also the Lord of the sixth in the sixth, or in *Quartile* or *Opposition* to the Ascendent, or his Lord out of fixed Signs; and if he be stronger than the Lord of the Ascendent, the Disease encreases.

V. A Malevolent in the sixth, prolongs the Disease: so also if the Lord of the sixth, be in the Ascendent, or Lord of the Ascendent, be in the sixth, especially in fixed Signs, or be disposed of by the Lord of the sixth.

VI. The Lord of the Ascendent, or the Moon slow in Motion (especially if *Saturn* be Lord of the Ascendent) shews a long and tedious Sickness; the same if either of them, or the Sun be weak, and joynted to an Infortune.

VII. If the Disease comes of

Melancholy, and *Saturn* Author thereof, be in *Taurus*, *Virgo* or *Capricorn* a Sign of the same Nature, it exceedingly encreases and prolongs the Disease: the same of the other Humours.

VII. If *Sorpio* ascend then *Mars* is Lord both of the Ascendent and sixth, the which if he be in either of those Houses, he will add fuel to the fire.

IX. The Luminaries Cadent, and their Dispositors with the Lord of the Ascendent, cadent and afflicted, shews a long and dangerous Disease; yea although the Benevolents lend their assisting beams.

X. *Sol*, *Luna*, or Lord of the Ascendent with a Fortune, and he Retrograde, promiseth Cure, but with much tediousness: but in Conjunction, Quartile or Opposition of *Saturn*, a very long Disease.

XI. If the Lord of the Ascendent apply to a Fortune, and begin to be Retrograde in his first Station before he touch the Beams of the same Fortune either by Conjunction or Aspect, it shews a prolongation of the Sicknes.

XII. The Lord of the Ascendent in the VI; and Lord of the VI in the Ascendent, shews a long Disease.

XIII. The Lord of the Ascendent afflicted by the Lord of the VI or XII, and he or the Moon beholding an Infortune (chiefly *Saturn*) in fixed Signs, the said

Dom. Ascen. or *Luna* being slow in Motion, diminished in Light and Number, Cadent, (and the Dom. Ascendent Retrograde) It shews a very long Sicknes.

XIV. Cadent Houses, fixed Signs, slowness of Motion, decreasing in Light, Retrogradation, and the Superiour Planets *Saturn* and *Jupiter* being Significators, are Testimonies of a long Disease.

XV. *Luna* though increasing in Light, yet being slow in Motion increases and lengthens the Disease.

XVI. Succedent Houses, common Signs, mean Motion, and the Significator of the Disease either inferiour Planets, or Superiour in moveable Signs; are all Testimonies of a Sicknes neither long nor short.

XVII. *Pars Fortunæ* Cadent and in a fixed Sign shews a long Sicknes.

XVIII. Consider the Lord of the VI and how many degrees he wants of being out of the Sign he is in, or how many degrees the Lord of the Ascendent *Sol* or *Luna* want of the Partil Beams of the adjuvant Planet and for every degree of distance in moveable Signs and Angles account days; Succedents, weeks; Cadents months, in Angles and common Signs weeks; Succedents, months; Cadents, years: in fixed Signs in Angles, months: in Succedents, years; in Cadents never.

CHAP. VI.

Prognosticks of Life at the Decumbiture.

I. IF the Lord of the Ascendent be stronger than the Lord of the sixth, eighth, or twelfth; or if *Jupiter* (being Lord of good Houses) be in Conjunction, Sextile, Trine or Opposition of the Lord of the sixth: or the Sun, or Moon, and Lord of the Ascendent be free from affliction of evil Planets, all these preface Life.

II. If *Saturn*, signifying the Disease, be Oriental, and it come of Cold; or Occidental, and it come of Heat, being in no Aspect of the Sun or Moon, the Sick will overcome, but if he be Combust the Sick will scarcely escape.

III. *Mars* is not so evil when he is Occidental, as when he is Oriental: and he afflicts the Moon more when she is Oriental, than when she is Occidental.

IV. If the Lord of the Ascendent dispose of the Lord of the eighth, it is very good; yea in this case, if then the Lord of the Ascendent apply to the Body of the Lord of the eighth (if it be *Jupiter*, *Sol*, *Venus* or *Mercury*) the Sick will escape, although with eminent Signs of danger.

V. If good Planets be in the Ascendent or *Medium Cæli*, as *Jupiter*, *Venus*, *Sol*, or *Luna*, and strong withal, they will stoutly maintain Life, though the Significators of it be never so much afflicted.

VI. *Jupiter*, *Venus*, *Sol* and *Luna* in the Ascendent, not afflicted, nor beholding the Lord of the eighth, nor being Lords of the eighth themselves, take away all fear of Death, and promise speedy Cure.

VII. *Luna* in Conjunction of *Jupiter* is very good, more especially if in *Cancer*; and then applying to the Lord of the Ascendent: The same also if Angular, well disposed, and free from the Beams or bodies of *Saturn* or *Mars*, or Lord of the eighth.

VIII. *Luna*, encreasing in Light, swift in Motion, and not in the sixth, eighth, or twelfth, applying to a Conjunction, Sextile, Trine or Antiscion of the Lord of the Ascendent, (if he be direct, and not impeded, nor in his Idetriment or fall) promisseth Recovery: the same if there be a Reception, between the Lords of the Ascendent and eighth.

IX. If *Luna* seperate from a
O 3 weak

weak Malevolent, and apply to a strong Benevolent, the Sick recovers with much facility: the same also if the Significators of the Sick, be stronger than the inimical, or destroying and afflicting Planets.

X. *Sol*, *Luna*, and the Lord of the Ascendent, free from the Beams of *Saturn*, *Mars*, or the Lord of Death, at the Decumbiture, takes away even the very suspicion of Death.

XI. *Luna* beholding three or four Planets (whether good or evil, or with what Aspect soever) gives hopes of Life, yea if *Luna* be with the Dom. Ascendent in the VIII.

XII. *Luna* in the Medium Cœli in good Aspect of *Saturn*, *Jupiter*, *Mars* and *Sol* is a perfect Signification of Life; but it shews great Vomiting, even to the prejudice of the Sight.

XIII. *Luna* in *Scorpio* in the Imum Cœli, in Quartile of *Mars* in *Leo*, and in Opposition of the Sun, *Venus*, and *Mercury* in the Medium Cœli, shews Plenitudo supra vires, and a Vomiting, but the Sick may escape.

XIV. *Luna* separating from the Lord of the VIII, and immediately applying to the Sextile or Trine of the Sun in the Ascendent, seventh, Medium Cœli or eleventh the Sick will recover.

XV. *Luna* not afflicted by the Lord of the VIII, or being lately separated from him (though she be Combust and in a Cadent House) the Sick may after a long time escape; but

more especially if the Sun be Lord of the Ascendent.

XVI. *Luna* separating from the Lord of the eighth, and applying to the Lord of the Medium Cœli, or Planet in the Medium Cœli; it shews recovery by means of Medicine.

XVII. If the Lord of the Ascendent be every way free from affliction, the Sick will recover, although an evil Planet, be in the Ascendent. This is so much the more certain, if *Luna* be also free from Affliction.

XVIII. The Lord of the Ascendent applying to the Sextile or Trine of *Saturn*, and he strong, Angular, and Lord of no evil House, may shew recovery.

XIX. *Sol* Lord of the Ascendent, is a good sign of Life; but more especially if he be free from affliction, and yet much better, if *Luna* be so too.

XX. *Luna* in the Ascendent, second, third, fifth, ninth, Medium Cœli, or eleventh Houses, in Conjunction, Sextile or Trine of the Lord of the Ascendent in his Antiscion (although an Infortuné, and he strong) they both increasing in Light and Motion, are eminent Signs of Health.

XXI. *Luna* in her own House, or Houses of *Jupiter* or *Venus*, and in good aspect of either of them, free from the Rays of the Infortunes, take away even the very imagination of Death.

XXII. The same judge if the Sun, Moon, Ascendent and its Lord be free from affliction of

of the Infortunes or Lord of the eighth.

XXIII. Some say if *Jupiter* or *Venus* or both, cast a friendly Aspect to the Moon, though she be in Conjunction of *Saturn* or *Mars*, yet the Sick shall escape.

XXIV. *Sors* well placed, Fortunate and in Moveable Signs, shews Health and short Sickness.

XXV. Examine all the Significators as the Ascendent, *Sol*, *Luna*, and their Lords; if all these or the greatest part of them, be safe, well affected, Fortunate, and free from evil Aspects, health comes apace.

XXVI. The Lord of the Ascendent Angular, Direct, free

from ill Aspects, and not Combust, presages recovery, more especially if *Luna* (free from affliction) apply to him by good Aspect.

XXVII. The Lords of the Ascendent or VI, *Sol*, *Luna*, or their Lords in the Medium Cœli increasing in Light and Motion, Health is a coming.

XXVIII. The North Latitude of *Jupiter* and South Latitude of *Venus*, encreases their good significations: So *Saturn* Oriental, and *Mars* Occidental less hurt the Sick.

XXIX. A Fortune, as *Jupiter* collecting the Light of all or most of the significators, are eminent significations of Good.

CHAP. VII.

Prognosticks of Death at the Decumbiture.

I. IF the Lord of the Ascendent be afflicted in the eighth, or combust in the Ascendent, or apply to the Lord of the Eighth, by Body, the Sick will certainly dye; unless the Lord of the Ascendent dispose of the Lord of the eighth (by Sect. 4. Chap. 6. Of this Book.)

II. The Lord of the eighth, in the Mid-heaven afflicting the Lord of the Ascendent; the

Physick will go near to kill the Patient.

III. The Lord of the eighth strong in the Ascendent, or Dispositor of the Moon at the Decumbiture, or afflict her Dispositor, it foreshews Death, and so much the more if he be Retrograde or unfortunate.

IV. If the Lord of the Ascendent sepearate from Conjunction of the Lord of the eighth, by Retrogradation, when they

○ 4 come

come to Conjunction by Direction, the Sick will dye, unless the Sun interpose his Beams before hand.

V. The Lord of the Ascendent, in Aspect, or with the *Antiscion* of an Infortune, in the eighth (without the Beams of *Jupiter* or *Venus*.) or in Conjunction with *Saturn* or *Mars*, threatens Death: an Infortune (or upon the Culp of the) Ascendent, or fixed Stars of a violent nature, the same: A Benevolent the contrary.

VI. The Lord of the eighth, in an Angle, especially the seventh, the Moon, and the Lord of the Ascendent being Cadent, or afflicted by Malevolents, or Lord of the eighth, are mortal Signs.

VII. The Lord of the Ascendent in the seventh, sixth, or fourth, afflicted by *Saturn*, *Mars*, or Lord of the eighth, speak aloud that Death is coming: the slower in Motion, that the afflicting Planet is, the worse it is, for the Moon then meets him again upon the critical day.

VIII. The Lord of the Ascendent, or the Luminaries in *Leo* or *Aquary*, impeded by the Body of the Lords of the sixth, eighth, or twelfth Houses, shew danger of Death.

IX. The *Sin* in Conjunction, *Quartile* or *Antiscion* of a Malevolent and separating, applies to another malevolent; or *Mars* opposing the Lord of the Ascendent, having Dignities in his place, Death comes galloping.

X. If *Cancer* or *Leo* ascend, and

the *Sun* or *Moon* behold the Lord of the eighth, Death is coming.

XI. It is very bad (if the Disease come of Retention) when *Saturn* is in his *Perigeon*: the like of *Mars* if the Disease be a Fever, or proceed of Choler: the same of *Jupiter*, if it be a Surfeit, or the Sickness come of Plenitude, &c.

XII. The afflicting Planet being one of the Superiours strong and Angular, destroys with a vengeance.

XIII. The Dom. Asc. with one evil Planet, and another evil one in the Ascendent, destroys without remedy.

XIV. The *Decumbiture* being near the time of an *Eclipse*, the defect or dispositor of the *Defect*, being in the Ascend. of the *Radix* or in the place of one of the *Hylegs*, it is very dangerous, and commonly mortal.

XV. The Ascend. of the *Decumbiture* being the vii. or viii. of the *Radix*, or contrariwise, the Ascend. of the *Radix* the vii. of viii. of the *Decumbiture*, it is very evil.

XVI. If at the *Decumbiture* any of the five *Hylegiacks* be very much afflicted judge Death, unless the Fortunes intervene.

XVII. The Dom. Asc. Cadent, and Lord of the viii. Angular, and a superiour Planet, are evil Signs.

XVIII. Consider the Light of time, 'tis better that the *Sun* be afflicted in the Night, and the *Moon* in the day, 'tis less hurt to the Sick.

XIX. The Dom. Asc. combust though in the Ascend. is evil: but

but in the vij. it is much worse, because (besides the *Combustion*) two Oppositions afflict the Asc. at once.

XX. The Lord of the Ascend. or the Ascend. or both afflicted by violent Fixed Stars, (as *Caput Medusa* in 21 8; the *Pleiades* in 25 8; *Aldebaran* in 5 II; *Castor* in 16 6; *Hercules* in 19 6; *Presep* in 3 8; *Cauda Leonis* in 17 11; *Lanx Australis* in 10 11; *Frons Scorpij* in 29 11; *Cor Scorpij* in 5 11) presage Death.

XXI. If *Sol* at the *Decumbiture* shall be afflicted by *Conjunction*, *Quartile*, or *Opposition* of *Saturn* or *Mars*, and be in the perfect *Antiscion* of a malign Planet, applying and not separating, either Death or an extraordinary long Sickness succeeds.

XXII. The *Dom. Asc.* in the iiij. or applying to a Planet in the iiij, or aspected of him with *Quartile* or *Opposition* it shews Death.

XXIII. *Luna* and her Dispositor cadent, and the Infortunes Angular, afflicting either of them or *Dom. Asc.* is a firm token of Death.

XXIV. The Lord of the viij. in the iiij, the Disease ends in Death: so also if the Lord of the vi. be in the viij.

XXV. *Sors* infortunated, or its dispositor *combust*, or otherwise afflicted, or in the iiij. or viij. foreshews evil.

XXVI. Both Luminaries under the Earth, or a translation of Light between the Lord of the Asc. and Lord of the viij, is always very dangerous, most commonly mortal.

XXVII. The Lord of the Asc. and Lord of the vi. in *Quartile* or *Opposition* from Angles, shews an incurable Disease with perpetual pain.

XXVIII. Both the *Luminaries* Cadent, and their dispositors with the Lord of the Asc. afflicted by the Infortunes, it is great danger to the Sick: and in this case though the benevolents assist, 'twill be a long Sickness.

XXIX. The Lord of the vi. *Retrograde*, *Combust*, or in his *Detriment* and *Fall* in the viij. in 6 11 or 7, shews the Disease will continue to Death.

XXX. *Jupiter* *Dom. Asc.* *Retrograde* in the viij, the Moon separating from him, and applying to *Mars* shews Death.

XXXI. *Sol* *Dom. Asc.* in the viij. in aspect with *Saturn* or *Mars* or but by translation of beams, (if either be Lords of the 4th) the Sick will certainly dye.

XXXII. *Saturn* within gr. 5. of the Ascend. and combust foreshews Death, unless he be Lord of the Ascend. and Authors say the same of *Mercury*.

XXXIII. The Lord of the Ascend. near the Cusps of the I. C. or viij, being in Fall or Detriment shews the same.

XXXIV. The Lord of the Asc. *Cadent* is an ill Sign; and so much the more, if he and the Moon be afflicted, or *Combust*.

XXXV. The Lord of the Asc. and Lord of the viij. both one Planet if he be Cadent, and afflicted by *Saturn* or *Mars*, or the Sun, it is of evil consequence: more especially if he be *Retrograde*.

XXXVI. Though

XXXVI. Though the Lord of the Ascendent be in the Ascendent, if the Ascend. be afflicted by the Lord of the viij. or ♄ be in the viij. 'tis Death.

XXXVII. The Lord of the Ascend. under the earth and Cadent; or, if he gives his Light to the Lord of the viij. in an Angle, it shews Death.

XXXVIII. The L. of the Asc. Cadent, Combust, or otherwise afflicted in a Cadent House, destroys the Sick though Jupiter be in the Ascend.

XXXIX. The Lord of the Asc. and Lord of the vj. in Conjunction in an unfortunate place, foreshews Death: and so much the more if they be combust or retrograde or both.

XL. Though the Moon applys to Venus in Libra, yet if she be Lady of the Eighth, and the Lord of the Asc. be in the I.C. the Sick will dye.

XLI. If the Lord of the Asc. in the Radix be in the viij. of the Decumb. though in the Sign ascending at Birth, the Moon also applying to the Lord of the viij. it shews Death.

XLII. The Lord of the Asc. combust, or sub radiis in the I.C. vj, vij. viij, or xij, or be in Conjunction, Quartile or Opposition of Saturn, Mars or the Sun, or Lord of the viij or Planet in the viij, or be near the Cusp of the viij. the Sick will doubtless dye. These are

all mortal significations, but more especially if the ☿ be also ill affected, and be in the viij. or viij. or applying to ☿, ☐, or ☿ of the Lord of the viij. Planet in the viij. Saturn or Mars, or be Combust. Understand the same also of the Planet exalted in the Ascendent.

XLIII. If a Fortune, as Jupiter or Venus be in the Ascendent in Conjunction with the Lord of the viij, and the Lord of the Asc. be in the viij; the Sick will dye, yet it may signify a Lightning before Death.

XLIV. The Lord of the Ascendent, Sun and Moon in the last Degrees of any Sign, signifies a sudden change of the Disease: and if those Significators move to an affliction, the Sick dyes.

XLV. The Lord of the Ascendent, though he separates from the Lord of the viij. or Planet in the viij; yet if he applies to the Conjunction, Quartile or Opposition of Saturn or Mars, the Sick will dye.

XLVI. Though the Moon apply to ♄, yet if the Dom. Asc. be combust, and the Sun be Lord of the IC. or viij. the sick will not escape.

XLVII. The L. of the viij. in the MC. applying to the Dom. Asc. shews the Sick will dye by force of his Medicine.

XLVIII. ☿ dispositor of the ☿ Combust, and Retrograde, gives fear the Sick will dye mad.

CHAP. VIII.

Prognosticks of Death by the Position of the Moon.

I. **T**HE Moon Combust (especially in the eighth and in *Leo*) or in Conjunction with the *Pleiades*, *Aldebaran*, *Caput Algol*, or other violent fixed Stars of the first or second Magnitude, near the Ecliptick threatens Death: the same if she apply to her Nodes.

II. The Moon applying to any Star or Planet in the eighth, or Lord of the eighth, or Translating their Light or vertue to the Lords of the Ascendent, signifies Death is approaching: So also if the Moon separate from the Lord of the Ascendent, and apply to the Lord of the eighth.

III. Luna going from Combustion at the Decumbiture, the Disease encreases till she comes to the Opposition: at what time, if she meet with a good Planet, the Sick will live, otherwise dye.

IV. There is little hopes of Life, when the Moon is besieged by evil Planets, or by a Malevolent and the Sun.

V. The Moon applying (within twelve degrees) *ad Conjunctionem Solis*, at the Decumbiture, gives you warning, that Death is at hand; and the nearer the Moon is to the Sun, the nearer is the Sick to his end,

and this seldom failes, unless the Lord of the Ascendent be very strong.

VI. The Moon in the Ascendent, in a Sign of a contrary Nature, (especially *Leo*) most commonly sends the Sick *apud Inferos*; the same if she be in Conjunction, Quartile, Opposition, or Antiscion of *Mars*, in the fourth, unless she be very strong.

VII. The Moon in Opposition to the Lord of the Ascendent, and he also retrograde or combust, is dangerous.

VIII. The Moon with *Saturn* or *Mars*; or the Moon with the one, and the Sun with the other; or either of them with the one, and the Lord of the Ascendent with the other, are Significations that Death is near at hand.

IX. If the Moon in an acute Disease, or the Sun in a Chronical, be in Aspect, or with the Antiscion of an Infortune in the eighth, it threatens Death, unless *Jupiter* or *Venus* be strong and help: in this case, see which is strongest and pass judgment accordingly.

X. The Moon in Conjunction with *Saturn* and *Jupiter* profits not at all, unless *Jupiter* be much stronger than *Saturn*: and if she be

be Lady of the Eighth, and apply to the Lord of the Ascendent, or dispose of him, Death then comes upon the back of a Dromedary.

XI. *Luna* in *Scorpio*, in the *I. C.* in Conjunction with *Cauda Draconis*, separating from her dispositor or Lord of the *I. C.* and applying to the Lord of the *VIII*, it shews Death. But if *Sol*, Lord of the Ascendent be in the *M. C.* the sick may recover, but after a sharp fit and a long time; for in this though *Sol* be in the *M. C.* yet the *Moon* is in Opposition to him.

XII. *Luna* Lady of the *VIII*, in the *VI*, and separated from the Conjunction of *Saturn*; and applying to the Lord of the Ascendent, by any Aspect, it is certain Death. If she be in the *VIII*, the same (although she apply to the *Sextile* and *Trine* of the *Sun*) and so much the more if the *Dom. Ascendent* be Cadent.

XIII. *Luna* separating from *Jupiter Dom. Ascend.* and applying to *Saturn*, Lord of the *VI*, it is dangerous; and if the *Do. Asc.* be combust, mortal.

XIV. *Luna* Cadent and *in via combusta* applying to the Lord of the *VIII* and *VI*, in Conjunction, the sick will dye.

XV. *Luna* separating from *Jupiter* or *Venus*, in Angles or Succedents, and applying to a Planet Retrograde, and in his fall or detriment and cadent, it foreshews Death: so much the more especially if the *Moon*, or Planet she applies to, or *Do. Asc.* or all of them be going out of the Signs or Houses they are in.

XVI. *Luna* applying to the Lord of the *VIII*, and *Do. Asc.* in the *VIII*, in Aspect with the Lord of the *VIII*, with or without reception it is Death.

XVII. *Luna* in *VI*, separating from an Opposition of *Saturn*, and applying to the Quartile of *Mars*, Lord of the *VIII*, in the *M. C.* it foreshews Death, more especially if the Lord of the Ascendent be in the *VIII* also.

XVIII. *Luna* separating from *Mars*, Lord of the *VI*, and the *Do. Asc.* both applying to the Lord of the *VIII*, it is Death.

XIX. *Luna* Combust, whether applying to, or separating from *Sol*; but if separating from *Sol*, and applying to *Saturn* or *Mars* Retrograde and in the *X*, *XII*, *VI*, or *VIII* Houses, it is Death, let the *Moon* be wheresoever she will, but especially if the *Do. Asc.* be in the *VIII*, and Lord of the *VIII* also.

XX. *Luna* applying to any Planet in the *VIII*, especially to *Saturn* or *Mars*, it is dangerous; but if the *Do. Asc.* be strong or Angular, the sick may after eminent danger recover.

XXI. *Luna* within 3, 4 or 5 Degrees of going out of the Sign she is in, and then applying to a Retrograde Planet, it is dangerous.

XX. *Luna* separating from the *Dom. I. C.* and applying to *Venus*, Lady of the Ascendent and *VIII*, signifies Death.

XXIII. *Luna* and *Do. Asc.* afflicted or impeded, universally signifies either death or a long sickness.

XXIV. *Luna*

XXIV. *Luna* applying to the *Sextile* or *Trine* of *Sol*, it is a good and healthful Sign; but if she separate from the Sun by what aspect soever, it is of evil consequence.

XXV. *Luna* in the *I. C.* with *Mars*, and the Fortunes Cadent, It is a dangerous Sign.

XXVI. When *Luna* and *Sol* both are under the Earth it is dangerous: more especially if they be both afflicted by *Saturn* or *Mars*.

XXVII. *Luna* in the *VI*, separating from the Opposition of *Saturn*, Lord of the *VIII*, and applying to a Quartile of *Mars*, is very dangerous, unless the Moon be essentially fortified.

XXVIII. *Luna* and Lord of the Ascendent, in Conjunction with the Lord of the *VIII*, threatens Death, unless the Aspects of the Fortunes interpose.

XXIX. If *Luna* separate a *Sextile Dom. Ascendentis*, and apply to the Conjunction of *Sol*, (Lord of the Eighth) shews Death; and so much the more if the Lord of the *VI*, is Retrograde, and casts a Quartile to the Cusp of the *VII*.

XXX. The Moon in the Ascendent in *Pisces*, separating from a good Aspect of *Jupiter* (Lord of the Ascendent) and applying to a good Aspect of *Mars* (Lord of the *VI*, and immediately after to an evil Aspect of the Lord of the *VIII*, is a signification of Death.

XXXI. The Moon in the *I. C.* in *Leo*, afflicted by *Sol* and *Mars* in the *VI*, foreshew Death: It is a Maxim in this Art, that the

Moon in *I. C.* in *Leo*, though not afflicted, destroys the sick, especially if she be *Domina Ascendentis*.

XXXII. The Moon in *Scorpio*, in the Ascendent, and *Mars* Lord of the *VI*, afflicted by *Saturn* or *Sol*, the Patient Dies, and is indeed the Author of his own Death.

XXXIII. The Moon Lady of the Ascendent, in the *I. C.* applying to the Conjunction of a Planet Retrograde, and Lord of the *VIII*, (although *Jupiter*) foreshew Death: but if to *Saturn* or *Mars* the Token is Infalible.

XXXIV. The Moon casting a Quartile to *Caput Draconis*, or *Cauda Draconis*, is said to signify Death, unless upon a Critical day; then it only signifies violence of the Disease, and a great pain at Head, Heart, and Stomach.

XXXV. *Luna* in Conjunction with *Caput Draconis* or *Cauda Draconis* at the Decumbiture, or within 5 Degrees thereof, foreshews Death, but more especially if she be afflicted by the Conjunction, Quartile or Opposition of *Saturn* or *Mars*, at the same time.

XXXVI. *Luna* with the *Pleiades* in the *VIII*, is a dreadful Sign, but the Sick will dye void of the fear of it.

XXXVII. *Luna* in the *VIII*, or applying to the Lord of the *VIII*, or afflicted by any Infortune in the *VIII*, are all dangerous Signs.

XXXVIII. *Luna* and *Dom. Asc.* both beholding the *VIII* House, or afflicted by the Lord there-

hereof, bids the sick look after another Habitation.

XXXIX. *Luna* Lady of the VIII, separating from the Lord of the Ascendent, and applying to the Lord of the IX, or contrariwise; or translating the light of the Lords of the Ascendent, and VIII, to the Lord of the IX, and contrariwise, bids the sick prepare for another World: for the IX House signifies not only long Journies out of one Country to another Land, but also Heaven or another Life.

XL. *Luna* applying at the Decumbiture to the Lords of the VI and VIII together, shews certain Death.

XLI. *Luna*, or the Lord of the Ascendent, or both in Conjunction, Quartile, or Opposition of the Lord of the M.C. the Distemper seems to be supernatural, and the Hand of God.

XLII. *Luna* in the I. C. separating from the Lord of the Ascendent, and applying to the Lord of the VIII, although by a *Trine*, the sick will dye.

XLIII. *Luna* and Lord of the Ascendent both Cadent, and she applying to the *Trine* of the Lord of the Ascendent, and immediately after to the Conjunction of the Lord of the VIII, or his dispositor, the sick will dye. But this may be doubtful.

XLIV. *Luna* in the VII, separating from *Mercury* Lord of the VIII, in the IX, and he Combust, and the Lord of the Ascendent Combust also, though the *Moon* applys to *Venus* (if she be a going out of the Sign she is in, in a Cadent House) and *Jupiter* be in

the Ascendent, yet the sick will dye.

XLV. Some say, though *Luna* Aspect the VIII, or be in the VIII, applying to the Lord of the IV, if the Lord of the Ascendent Aspect not the VIII, nor its Lord the sick may escape: 'tis doubtful, the sick may dye.

XLVI. Though the *Moon* apply to the Lord of the I. C. by *Trine*, if he be in the VIII, and the Lord of the VIII, be Retrograde, and in *Trine* to *Luna*, the sick will suddenly dye.

XLVII. *Luna* in the I. C. and afflicted by *Saturn*, is very dangerous, whether he be Lord of the VIII, or no.

XLVIII. *Luna* separating from the Lord of the Ascendent, although he be in his own House, yet if she applys to the Conjunction or Opposition of the Lord of the VIII, it presages Death.

XLIX. *Luna* Lady of the VIII, Cadent and applying to the Conjunction or Opposition of *Sol*, the Lord of the Ascendent being in his fall, retrograde, and afflicted is very dangerous.

L. *Luna* disposed of by the Lord of the VIII, although she be in the Seventh, is very dangerous, yea though the Lord of the VIII, be in the XII, disposed of by the Lord of the Ascendent, but much more if the Lord of the Ascendent be Retrograde in the IX.

LI. *Luna* separating from a Planet in the VI, though *Jupiter*, and applying to a Planet in the VIII, though *Mercury* or *Venus*, they being Rulers of the IV, the sick

sick will dye. The same if *Luna* be in the IV, upon such application.

LII. *Luna* separating from Conjunction *Dom. Asc.* and applying to Combustion, *Sol* being Lord of the VIII, and after that to the Conjunction of *Mars*, the sick will doubtless dye.

LIII. *Luna* separating from the Lord of the X, in the VI, and applying to the Lord of the VIII, either in the VIII or IV, It presages Death.

LIV. *Luna* in the IV, separating from the Lords of the Ascendent, and VII, and applying to the Conjunction of *Saturn* in the IV, Retrograde, shews Death.

LV. *Luna* in the Ascendent, void of Course, and afterwards applying to the Lord of the VIII is very dangerous.

LVI. *Luna* applying to *Mercury* Lord of the VIII, if he dyes he dyes frantick or mad.

LVII. *Luna* Lady of the Ascendent, applying to the Conjunction of the Lord of the I. C. in the VIII, is certain Death.

LVIII. *Luna* translating the light and vertue of *Dom. Asc.* to the Lord of the VIII, or contrariwise, signifies Death. So also if the *Moon* be afflicted or perigrine, the *Dom. Asc.* being at the same time afflicted in the VIII.

LIX. *Luna* applying to the Op-

position of *Dom. Asc.* and he Retrograde or Combust, shews Death or a sharp Disease not easily curable. So also if she be besieged of the Infortunes, or of *Sol* and *Saturn*, or *Sol* and *Mars*.

LX. *Luna* at the Decumbiture in the place of a Malevolent planet at Birth is very dangerous, so if she transites the Quartile or Opposition thereof: the contrary if she Transits the Conjunction Sextile or Trine, of a benevolent Planet.

LXI. The principal thing to be noted in the *Moon* is, if she be Combust, or under the Sun-Beams, or in Conjunction, Quartile, or Opposition of *Saturn*, *Mars* or the *Sun*, or some of them, or be in the VIII, or afflicted by the Lord of the VIII, by Conjunction, Quartile or Opposition, without any friendly Beams, or mutual reception of *Jupiter* or *Venus*, the Sick will certainly dye.

LXII. *Luna* separating from the Lords of the Ascendent and VIII, and applying to the Lord of the I. C. in the M. C. the sick will dye.

LXIII. *Luna* in mutual reception with the Lord of the VIII, is a dangerous Sign.

LXIV. *Luna* Combust in *Leo* in the VIII, is a Mortal Sign. So also if she be in *Libra*, and apply to *Saturn* and *Mercury*, being conjoynd.

CHAP. IX.

The Prognosticks of Hermes, upon the first Decumbiture, by the Moon: And first of her Affliction in the Fiery Trigon.

I. IF the Moon be in *Aries*, and be afflicted by *Saturn*, and she apply to none of the Fortunes, the sick will dye: but if the Moon apply to the Fortunes, they recover, or it turns to another Disease.

But if *Saturn* and *Mars* both afflict, the sick cannot possibly escape, and when the Moon comes to the Opposition of *Mars*, the Disease will overcome Nature.

II. If the Moon be in *Aries*, afflicted of *Mars*, and separating from him, apply to the Conjunction, Quartile, or Opposition of *Saturn*, there is danger of Death: but if she apply to the Conjunction, Sextile, or Trine, of the Fortunes, the Sick will recover.

If *Saturn* and *Mars* afflict not at the same time, there is certainly no danger: but if both *Sol* and *Mars* afflict the Moon at the same time, the sick cannot escape, but will dye, as authors say, within 8 days or however, at the next ill Aspect of *Saturn* or *Mars*.

III. The Moon in *Leo*, afflicted by *Saturn*, presageth Death

(if *Jupiter* or *Venus* assist not;) and then upon the next evil Aspect of *Saturn*, the sick dyeth: but otherwise, on the next good Aspect of *Jupiter* or *Mars*, they recover. But if both *Saturn* and *Mars* afflict the Moon, and she be combust, decreasing in light and motion, the sick cannot escape: If *Sol* and *Mars* afflict, he will dye of the sickness, though it be after a year or two.

IV. The Moon in *Leo*, afflicted by *Mars*, (diminishing in light and motion) upon her next meeting with the beams of *Saturn* or *Mars*, the Sick must dye, unless there be a Prohibition by the Fortunes, and she increase in Light and Motion. If the Moon be Combust the danger is much the greater: if she separate from *Mars*, or from *Saturn* and *Mars*, the greatest danger is over, unless she forthwith apply to combustion.

V. The Moon in *Sagitary*, afflicted by *Saturn*, not being beheld of the Fortunes, but applying to *Mars* or the Lord of the VIII. the sick will dye: but being not combust, but encreasing and

the Fortunes, the contrary. *If she separate from Saturn or Mars or both, and apply to the Sun, the sick will pass under exceeding torment, and dye with violent pain.*

VI. The Moon in Sagitary, afflicted by Mars, and not beheld be the good Aspect of Jupiter or Venus, the sick will hardly escape the seventh day; but pas-

sing that day, there will be hopes of Recovery: but, if before she apply to the Conjunction, Quar- tile or Opposition of Saturn, or Lord of the Eighth, the sickness will be incurable.

If the Moon be in Conjunction of Venus, the Disease changes, and the sick becomes Paralytick.

CHAP X.

The Moon afflicted in the Earthy Tri- gon.

I. **I**F the Moon in Taurus, afflicted by Saturn, apply to Combustion, or evil Aspect of Mars, the sick will scarcely live to the seventh day: but if she increase and meet with the beams of Jupiter or Venus, they recover. And the recovery will be so much the more certain, if the next Aspect of the Sun she meets withall is a Sextile or Trine; or she hastens to the Body of any noble fixed star of the Nature of Jupiter or Venus.

II. The Moon in Taurus, afflicted by Mars, and not assisted by some of the Fortunes, the sick will scarcely live till the ninth day; but if the Moon be with any Fortune, expect recovery after the sixth day, If Mars afflict without relief, and the Moon applies to the ☐ or ☿ of ♄, ☉, or Lord of the Eighth, the sick will dye within 30 days.

III. The Moon in Virgo, afflicted by Saturn, and not Assisted

with the Fortunes, the sick will be in danger about the fourteenth day: but if she be in Aspect with Jupiter or Venus, after a long time of recovery. If both Saturn or Mars afflict, the sick dyes with intolerable pain.

IV. The Moon in Virgo, afflicted by Mars, decreasing, and not assisted of the Fortunes, you may expect Death within thirty days. If the Moon separate from Mars, and apply to combustion, 'tis as bad, it bids the sick provide for another World: If she separates from Mars and Sol (being free from the beams of Saturn) the worst is past: if shee apply's to the Fortunes, the sick certainly recovers.

V. The Moon in Capricorn, afflicted by Saturn, and the Fortunes assist not, 'twill not be long before the sick gives place to Death, and contrariwise. If the Moon be separated from Saturn,

and apply to any of the Fortunes, or Sextile or Trine of Sol, health comes apace, Her Affliction with Saturn in this sign generally signifies Diseases in the Knees, if they be without swelling, the Disease is said to be incurable.

VI. The Moon in Capricorn, afflicted by Mars, if she apply not

to the Fortunes; at her next meeting with the Conjunction, Quartile or Opposition of Saturn or Mars, the sick dyes. If both the Infortunes afflict, she applying, it is certain Death: but if she separate the worst is past, unless she apply to combustion.

CHAP. XI.

The Moons affliction in the Airy Trigon.

I. **T**HE Moon in Gemini, afflicted by Saturn, decreasing in Light, and applying to Mars, the sick will scarce live to the fourteenth day: but if to Jupiter or Venus, the Disease will encrease to the thirtieth day, and after long time, the sick may recover. But if the Moon apply to the Conjunction, Square or Opposition of Saturn, upon the next congress the sick gives up the Ghost.

II. The Moon in Gemini, afflicted by Mars decreasing, and immediately applying to the evil Aspect of Saturn, the Sick scarcely escapes, and it will be the more dangerous, if he be Lord of the Eighth, or the Moon apply to a Planet in the Eighth. But the Moon separating from the Infortunes, is an indifferent sign, and shows the worst is past; if she then applies to the Fortunes, the sick doubtless escapes: but, if upon the

Decumbiture, Saturn and Mars afflict both together, the sick will dye in about 15 days space.

III. The Moon in Libra, afflicted by Saturn, and combust, Death is to be feared; chiefly, if she apply to Mars, and it is then to be feared, when she meets with his Body or opposition. But if she separate from the Infortunes, and apply to the Fortunes, there is hope of recovery, which will be the more speedy if she increase in light and motion.

IV. The Moon in Libra, afflicted by Mars, decreasing, and not separated, the sick will be in great danger, at such time as she comes to the Conjunction of Saturn or Mars. But if Jupiter or Venus frustrate the evil Beams of the Infortunes, the sick meets with a miraculous deliverance, and is perfectly restored to Health. If Mars and Sol both afflict the Moon, or she separate from the one, and

and applies to the other, the Disease is incurable.

V. The Moon in *Aquary*, afflicted by *Saturn*, the sickness will trouble the parts with remission and intension, till the Moon come to her second *Crisis*, and then if the Fortunes assist, there will be hopes of recovery. If Sol be in Conjunction with both *Saturn* and *Jupiter*, the Disease continues 90 days, and becomes chronic.

VI The Moon in *Aquary*, afflicted by *Mars*, and favourably assisted by the Fortunes, at her first or second *Crisis*, the Sick generally recovers before she comes to her place at the Decumbiture. If *Saturn* and *Mars* both afflict there is great danger because *Saturn* disposes of the Moon: but if she separates from them and apply to the Trine or Sextile of *Jupiter*, *Sol* or *Venus*, the Sick undoubtedly recovers.

CHAP. XII.

The Moon afflicted in the watery Trigon.

I. THE Moon in *Cancer*, afflicted by *Saturn*, decreasing, the Disease will be dangerous (especially if the Fortunes assist not) but if she be elongated from *Saturn*, six or eight Degrees, or be encreasing at her next meeting with the Fortunes, Nature overcomes the Disease.

But if the Moon apply to *Saturn*, the sick certainly dies, and although he may seem to recover, yet he will relapse again, languish away and dye.

II. The Moon in *Cancer*, afflicted by *Mars*, gives an exceeding acute Disease, and if not assisted by the Fortunes, the sick will scarcely escape: but if the Fortunes help, there will be hopes after the first *Crisis*.

If the Moon separate from *Mars* and apply to *Saturn*, or contrariwise, the sick can scarcely escape, if both afflict together, it is undoubted death, and so much the more certain, if the Moon goes immediately after, to combustion.

III. The Moon in *Scorpio* afflicted by *Saturn*, decreasing, the Disease will be dangerous and long: but assisted by the Fortunes, the Sick will recover, after a long time: but if none of the Fortunes behold the Moon, at the next evil congress of the Infortunes, death will lay violent hold upon his Captive.

IV. The Moon in *Scorpio*, afflicted by *Mars*, and combust, the Sick dyes within less than twenty days: but if she be free, and apply to the Fortunes

by good Aspect, the Sick may recover after ninety days.

This more especially if she be swift in Motion and departing from Combustion. If Venus and Mercury be with the Moon in this Sign, the patient will be subject to a flux of blood, when shee meets with the body or beams of the said Planets.

V. The Moon in Pisces, afflicted by Saturn, and not assisted with the Fortunes, the Sick will dye at such a time as she makes her second Crisis, especially if she applies to Combustion: but if she be assisted of Jupiter or Venus, after long time, the Sick may recover, leaving Pains and Aches behind it.

The Moon separating from Saturn and applying to Mars, or Combustion, is just like leaping out of the frying pan into the fire.

VI. The Moon in Pisces, afflicted of Mars, if the Fortunes assist not, and she apply to the evil Aspect of Saturn or Sol, Death is to be feared; but if she increase, and apply to Fortunes, Recovery.

If she be afflicted by both the Infortunes and apply to Combustion, Death is Unavoidable; more especially if evil fixed Stars be in her way.

VII. Lastly, if the Moon apply to any of the destroyers of Nature, as the Lords of the sixth, seventh, eighth, twelfth, or fourth, or Saturn or Mars, (not being Lords of good Houses) by Conjunction, Quarrel, or Opposition, the like Judgments arise: but if the said Destroyers of Nature behold the Moon by Sextile or Trine, or, by separation, she be much elongated from those evil Aspects, the Disease cannot then be said to be mortal, or deadly, but contrariwise, hopes of Recovery, if she next apply to the beams of the Fortunes.

This is also to be taken notice of as a general rule, that the Moon's application to the Sextile or Trine of Sol is as fortunate and of as great force in delivering from death as her application to the Conjunction, Sextile, or Trine of Jupiter or Venus.

These Judgments of Hermes are excellent, and were they well considered, in like manner with the other Planets, both as she either decreases, or increases, or is combusted, much good matter might arise (enough to fill a Volume) which might be more of truth than many things now practised, and be far more useful than many other things much esteemed by the Vulgar professor.

CHAP. XIII.

Of the Crifis of Diseases.

I. *Crifis* (à Galeno) est *velox & repentina morbi mutatio*; quâ infirmus, vel ad salutem, vel ad mortem deducitur. *Crifis*, according to Galen, is a swift and suddain change of any Disease, whereby the Sick is brought to recovery or Death.

And indeed every suddain change, whether in the Moon, Air, or sick Body, Galen calls a *Crifis*: and from this *Crifis* is Judgment given whether the Sick may live or die: It is derived, ἀπὸ τοῦ κριῖναι, judico, decerno, seu sententiam fero, to judge, discern, or pass sentence, whence these days are called *Critici*, *Judicarii*, or *Decretorii*, the days wherein a man may judge, discern or pass sentence of a Disease.

II. The Cause of a *Crifis* is twofold, to wit, Internal and External.

III. The Internal is taken from its own proper principle two ways: namely, first either Nature labours to expel the Disease; or else secondly, the Humours being drawn together, (though not fit for Excretion) and burthening Nature, by their own weight, break out and expel themselves.

IV. The External Cause, is from alteration of the Air; from whence ariseth the alteration of the Humours of the Body;

from hot to cold, from dry to moist; & contra. And Hippocrates in his sixth Aphorism, in Libro de Humana Naturâ, saith, that Heat and Moisture move forward the *Crifis*: for, saith he, some Diseases come from bad Diet; others from bad Air: from the first is bred Humours, the internal cause: from the second our Breath, the External cause of the *Crifis*.

V. The Air is altered in Quality by Celestial Influences; but especially by the Luminaries.

This is evident in the four seasons of the Year; as Spring, Summer, Autumn, and Winter, caused by the Sun; and when he rarifies the Air, how not only Plants, but Animals also spring, and admit of alteration; so some Plants, removed upon the Moons encrease, grow double, upon her decrease grow single; as also Oysters, Crabs, Lobsters, &c. are fuller at the full Moon, than at the new: and therefore the Spirits, or Humours being aerial, operate more, when they are excited than otherwise; so the sound of a Viol excites to Dancing; of a Trumpet, to War; of a Drum, to Valour, &c. Wherefore,

VI. The Universal Causes of *Crifis* are the Astral Bodies: for they stir by heat, Light, Motion, Position, or Configuration,

act not only upon the Aereal Elements, but Elementary Bodies.

VII. *Crises* are two-fold, to wit, either in acute and Lunar Diseases; or in Chronick and Solar.

VIII. *Crises* in acute Diseases are to be judged of by the Moon; those in Chronick by the Sun.

IX. Acute Diseases are, *perperacuti*, *peracuti*, *acuti*, & *acuti ex decidentia*.

X. *Perperacuti*, exceeding acute, are such as are abolved in the space of two, three, or four days, at utmost, either in Life or Death; of which kind are Pettilential Feavers, Apoplexia's, Pleurifies, Phrenfies, &c.

XI. *Peracuti*, very acute, are such as are judged in five, six, seven, or eight days, as *Febres causones*, *Synocha*, *Angina*, *Peripneumonia*, *Lethargus*, &c.

XII. *Acuti simpliciter*, simply acute, are they which are finished in eight, ten, twelve, fourteen, sixteen, eighteen, twenty, one and twenty days, or more, terminating, at farthest, in the space of a Lunar Revolution, which is about twenty seven days, eight hours, and some odd minutes.

XIII. *Acuti ex decidentia*, are such as from acute Diseases turn chronick, as when a continual Feaver turns into a He-tick; a *Peripneumonia* into an *Empyema*, or Ulcer in the Breast; and these generally terminate in about forty days.

XIV. Chronick Diseases are such as follow the Motion of the

Sun, making their Judgments about the nintyeth day, as in He-ticks, Consumptions, Dropsies, Quartans, &c. now when he comes to the Sextile or Trine of his place at the Decumbiture, some motion appears, whereby the succeeding *Crises* may in some measure be judged of; the which will be good if the Sun be aspected of good Planets; evil if of evil.

XV. *Crises* are accounted; first, *Salva*; secondly *Dubia*; thirdly *Judicata*: fourthly *non Judicata*.

XVI. *Crisis salva*, a safe Crisis, is that which happens without evil aspects: *Crisis dubia*, is that which comes with great or evil Aspects: *Crisis judicata*, is that which on the fourth or fifth day (when the Moon comes to her Sextile) hath Signs of Concoction appearing (either good or evil) and therefore presage the Disease to be judged on the seventh day: *Crisis non judicata*, is when that the Moon came to her Sextile (from her place at the Decumbiture) no Signs of Concoction appeared, whereby the *Crises* might be judged.

XVII. Of Critical days; some are called, first *Indicative*, which are when the Moon comes to her Semi-Sextile: secondly, *Intercidental*, which are, when the Moon comes to her Sextile: thirdly, *Critical*, which are, when the Moon comes to her Quartile.

The first are called Indicative, because they make manifest what the Disease is: the other Intercidental, because they fall between the

Indicative and Critical, on which the Disease is either encreased or remitted, and accordingly an evil or good Crisis may be expected: the last Critical, on which the Disease is generally judged.

XVIII. Whatsoever we have said of the Moon in acute Diseases, the same is also to be understood in like manner of the Sun in Chronick.

CHAP. XIV.

To draw the Critical Figure, and to find out the true beginnings of Critical Times.

I. **M**ake a Figure after the ordinary fashion, and rectifie the place of the Moon to the time of the Decumbiture, and set that Sign, Degree and Minute on the Ascendent.

II. To the Cusp of the Ascendent add thirty Degrees, you have the Cusp of the second; to which add thirty more, you have the Cusp of the third, and so continually add thirty, till you come to the twelfth.

III. This done, know, the Ascendent is the place of the Moon at the Decumbiture: the Cusp of the second, the first Indicative; the Cusp of the third, the first Intercidental: the Cusp of the fourth, the first Crisis, and so round; the Cusp of the seventh, or Opposition, the second Crisis: the Cusp of the tenth, the third Crisis, the Cusp of the Ascendent again, the fourth Crisis.

IV. And that you may the

better observe all the Transits, place also the Planets in this Scheme in their true places as in any other ordinary Figure.

Now to find the true critical Times, observe,

V. The Ancients (*many of them being ignorant of Astronomy*) found out the Critical Days by Number, accounting the 7, 14, 21, 28, &c. to be critical.

But in this they were deceived; for the critical Times are caused by the Moons coming to the Quartile or Opposition of her place at the Decumbiture: sometimes she makes her first Crisis on the sixth day sometimes on the seventh; sometimes on the eighth day, and the following Crisis accordingly; the which inequality is caused from her being sometimes slow in motion, sometimes swift. She is swift when she is in her Perigæon, or near the Earth, moving sometimes more than fifteen degrees in twenty four hours: she is slow when she is in her Apogæon;

or farthest distance from the Earth, moving then sometimes less than twelve degrees in the same time. Therefore,

VI. The true Indicative, Intercidental and Critical Times are truly and certainly to be found out, either by a Table of Logistical Logarithms; or by the natural Numbers themselves.

But first to find the Moons (or Suns) true place at the Decumbiture.

VII. To 6021. (the Complement Arithmetical of 24 hours) and the Logistical Logarithm of the Diurnal Motion, add the Logarithm of the Decumbiture, the Sum (abating 1. From the first Figure on the left hand) is the Logarithm of the part proportional, to be added to their place at the Noon preceeding, so shall you have their true place at the time of the Decumbiture: Or thus, as 24. is to the Sun or Moons Diurnal Motion, so the time of the Decumbiture from Noon, to the part proportional. This done,

VIII. To find the true Critical Times, do thus: Suppose for the first Crisis; see in the Ephemeris that day in which the Moons place at Noon, is next less than her place at her Crisis, and note the difference: then

observe the Diurnal Motion; To the Complement Arithmetical of the Diurnal Motion, and 3979. (the Logarithm of 24 hours) add the Logistical Logarithm of the aforesaid difference; the Sum (abating 1. from the first Figure on the left hand) is the Logistical Logarithm of the true time of the Crisis after noon that day; where note, that the Complement Arithmetical is the remainder of each Figure subtracted from 9, except the first on the right hand, which is subducted out of 10. so the Arithmetical Complement of 3979. is 6021. the like understand of any other. Or thus,

IX As the Sun or Moons Diurnal Motion, is to 24 hours: so is the aforesaid difference to the true time of the Crisis after-noon the same day.

The same work is to be in the Indicative and Intercidental days; all which in the 24 and 25 Chapters of this Book we shall sufficiently (if God will) clear by examples: The Logistical Logarithms are almost in every mans hand; those which are here most fit for our purpose, are such as we have affixed to the end of our Hora Mathematica, whose explication and use you may see Lib. 3. Cap. 2. Sect. 6, 7, 8, 9, 10. of the aforesaid Book.

CHAP. XV.

Prognosticks of a CRISIS.

I. IF the Moon upon a *Critical* day be well aspected of good Planets, it goes well with the Sick : if by ill Planets, it goes ill.

II. If the Moon be strong when she comes to her *Crisis*, that is angular, and in her House or Exaltation, the Sick recovers (though she be aspected of no Planet.) Judge the like of the Sun in Chronick Diseases : and contrariwise, if they be Cadent, and in their detriments and falls.

III. If the Moon be in *Conjunction* or aspect with any Planet, and neither of them have latitude, the *Crisis* will be firm : if they differ much in Latitude, the *Crisis* will be weak.

IV. In any *Crisis*, if the Moon aspect the same Planet that she did at the *Decumbiture*, the *Crisis* will be firm and stable, without alteration, be it good or bad : but if she meets with another Planet or Star, the Disease will change to better or worse, according to the nature of that she meets withal.

V. See what House the Planet she meets withal, at the *Crisis*, is Lord of in the *Decumbiture*, and judge accordingly.

VI. An imperfect *Crisis*, is when the Disease is changed upon every light occasion : and if Mars be Author of the Disease,

and in a double bodied Sign, the *Crisis* will be wholly uncertain.

In this case, consider the Moons Aspects to the Planets, if she meet with the evil beams of Saturn or Mars. let the Sick beware.

VII. The time called *Critical*, is always evil, because the Moon squares her place at the *Decumbiture*, and is in a Sign of contrary nature to what she was in before : at this time there ariseth a Battail, as it were between the Disease and Nature, where the Moon fights on Natures behalf : and this is the reason, if Saturn or Mars, or Lord of the fourth or eighth, afflict her, the Disease increases, or the Sick dyes.

VIII. But if the Moon beholds at the time of the *Crisis*, the Lord of the Ascendent, or Fortunes fortunately, Health comes apace.

IX. If the Disease terminate not upon the *first Crisis*, behold the *second Crisis*, and judge as before : if it terminate not then neither, see the *third Crisis*, and judge by the same Rules : if yet you think the Disease will not end, view the fourth *Crisis*, which is the place at the *Decumbiture*, and see how the Moon is posited and configured, for this must needs terminate all acute Diseases.

Where one acute Disease lasts a month, there is an hundred that last not half so long.

X. If the Disease end not upon the fourth *Crisis*, it is become *Chronick*, and must be judged by the Sun, in the same manner as we have done before by the Moon.

XI. The Aspects of the Moon to the Planets, upon *Indicative*, *Intercidental*, and *Critical* Days are always to be noted: for the good Beams of *Jupiter* and *Venus* (if not Lords of Death) always remit the most desperate Symptoms, and give some ease: And the Beams of *Saturn* or *Mars* exasperates the Disease, destroy the most hopeful Signs, and make way for Death.

XII. The Moon in *Conjunction* of *Sol*, on a *Critical* day is always evil; but in *Sextile* or *Trine* with him, there is nothing better; his *Quartile* or *Opposition* is always very bad.

XIII. If the Moon, upon a *Critical* day, apply to a Malevolent, if she be strongest, or in her House or Exaltation or Angular or both, she will make her part good with him; if weakest the Sick may prepare himself for Death.

XIV. If the Moon on a *Critical* day, be in *conjunction* with *Sol*, *Mars* or *Saturn*, and that she is withal, be Lord of the eighth, Death comes flying.

XV. If the Moon be afflicted at the *Crisis* (though not at the *Decumbiture*) a good *Crisis* cannot be expected; the Disease keeps its lodging, unless Death dislodge it.

XVI. If the Moon be void of Course at the *Decumbiture*, and then meet with affliction upon the *Critical* day, an ill *Crisis* is to be feared.

XVII. If there be an Eclipse, of either Luminary upon a *Critical* day, or a day over or under, it is a desperate Sign, and generally proves mortal.

XVIII. Having drawn a rational Figure on the *Decumbiture*: draw rational Figures on the *Indicative*, *Intercidental*, and *Critical* Times, so far, as till you think the Disease will terminate: then view the Positions, and Configurations of the Planets one with another; comparing them, first with themselves; then with the Figure of the *Decumbiture*.

XIX. *Luna* impeded at the *Decumbiture*, by the *conjunction* or evil beams of malevolent Planets, it foreshews a doubtful *Crisis*, and often portends Death.

XX. *Luna* swift in motion and decreasing in Light, being joyned to *Saturn*, shews a tedious Disease, and a fearful or dangerous *Crisis*: It is less evil for her to be slow in motion, provided she be increasing in Light.

XXI. *Luna* in *Quartile* or *Opposition* of *Saturn*, *Mars* or *Sol* at the *Decumbiture*, is dangerous and foreshews an evil *Crisis*; for at the *critical* time, she will be either in *Conjunction* or *Quartile* with them: which of how dangerous consequence it is, every Artist may easily judge.

CHAP. XVI.

Of Part of Fortune.

I. *Sors*, or Fortune, well placed, and fortunate in moveable Signs not combust, sheweth Health, and sudden Recovery, and contrariwise.

II. The Dispositor of *Sors*, being a Benevolent, (*i.e.* Lord of good Houses) angular and strong, and in good aspect with the Moon, or with the Benevolents, sheweth Health.

III. *Sors* in *Taurus*, *Gemini*, *Cancer*, *Leo*, *Libra* or *Pisces*, is good, and so much the better, if it be in *Conjunction* with its Lord, (except with the Sun) it signifies suddain Recovery.

IV. *Sors* in the Ascendent, or *Medium Caeli*, in *Coniunction*, *Sextile* or *Trine*, with *Jupiter* or *Venus*, or both, or with \odot *Caput*, shews certain and suddain Recovery.

V. *Sors* in *Conjunction* with

Regulus, in 25° Ω , or with *Arista* in 19° Ξ , or with *Lanx Borealis* in 11° M , especially in Angles, it is impossible the Sick should die.

VI. *Sors*, or its Dispositor, if fortunated by *Saturn*, *Mars*, or the Lord of the eighth, or disposed by them, or with \odot *Cauda*, or posited in the eighth, is an evil Sign, and shews Death: the same if in the fourth, sixth, or twelfth Houses.

VII. *Sors*, or its Dispositor, combust of the Sun, or near to, or within four degrees under the Earth, or in *Conjunction* with *Aldebaran* in 5° Π , or *Castor*, in 16° \odot , or *Cauda Leonis* in 17° M , or *Antares* in 5° A , will be as advantageous to the Sick, and have as powerful an influence upon him, as if he had drunk a large Potion of Rats-bane.

CHAP. XVII.

The Radical Prognosis of a long or short Sickness.

I. IF any one falls sick, while the principal Significators of Life are directed to the *Sextile* or *Trine* of any Promittor

tor, (let him be Lord of what House soever) or by direction may come suddenly thereto, it prelates short Sickness.

II. And so much the shorter, as the Direction falls, either in moveable Signs, Angles, or near the Ecliptick: Cadent Houses, and fixed Signs prolong the Sick-ness.

III. The same also, if the Hylegs come to the Bodies of the Fortunes, or Lords of the Ascendent, or tenth, in moveable Signs or Angles.

IV. The Hylegs to the *Conjunction*, *Quartile* or *Opposition* of an evil Promittor, gives ei her long or short Sickness, according to the Nature of the Promittor, Sign, and House the Direction falls in.

V. The Hylegs to the *Conjunction*, *Quartile* or *Opposition* of *Saturn* or *Mars*, in moveable Signs, or Angles, or both, give extrem acute Diseases: in common Signs, not of any great length; in fixed Signs, generally long and tedious Diseases.

VI. *Taurus* shews longer Diseases than *Scorpio*; and *Scorpio* longer than *Aquarius*; and *Aquarius* longer than *Leo*: so *Virgo* gives longer Diseases than *Pisces*; *Pisces* longer than *Gemini*; *Gemini* longer than *Sagittary*: And so in acute Diseases, *Aries* shews shorter Sickness than *Libra*; *Libra* shorter than *Can-*

cer; *Cancer* shorter than *Capricorn*.

VII. If there be an evil Direction, yet if powerful and good Transits occur in the interim, they will something abate the evil influence of a Direction; and contrariwise, if a good Direction be weighty, evil Transits may be a great prolongation of the Evil.

VIII. If good and evil Directions occur together, judge by the more powerful, yet always having respect to the weaker.

IX. If *Saturn* or *Jupiter*, or their Aspects be Promittors, they give very long Diseases, (unless they be very inimical to the Significator:) *Mars* and the Sun acute, but such as may degenerate into long: but *Venus*, *Mercury* and *Luna* being Promissors, generally give acute.

But in these Judgments respect both Sign & House by Sect. 2. Cap. 6.

X. If a Sickness be caused by Transits only; if they be of the lighter Planets only, they are generally short, of the weightier more long; yet generally Transits give both short, and less dangerous Sickness than Directions.

XI. The Ascendent to the *Opposition* of *Saturn* or *Jupiter* in fixed Signs, always gives long Sicknesses, although they be not Lords of the eighth, or have no dignities there.

CHAP. XVIII.

The Radical Prognosis of Life.

I. **T**HE Hylegs to the *Conjunction, Sextile or Trine* of *Jupiter or Venus*, openly proclaim that Health is coming; to the *Sextile or Trine* of other Planets, it is an eminent Signification of good.

II. The Hylegs to the *Quartile* or *Opposition* of *Jupiter or Venus* (not being Lords of evil Houses) shew Life; but so much the more, if, at the time of the Direction, they either transfit one anothers place in the Radix, or otherwise be in reception.

III. The Ascendent, or *Medium Caeli*, to the Bodies or Squares of *Saturn or Mars* will not kill, if they (in the Radix) be Lords of those places.

IV. The Ascend. to the *Quartile* or *Opposition* of the Lord of the sixth, or tenth (& *contra*) shew

a dangerous Sickness, yet Recovery.

V. If a benevolent Direction falls in the tenth, the Sick is saved by Physick; if in the seventh, by the carefulness of his Physician.

VI. Any of the Hylegs to *Regulus*, in the 25 ♄: or *Arctus*, in 19 ♄: or *Lanx Borealis* in 11 ♄: or any other benevolent fixed Star, of the first or second Magnitude, (if it fall in a good House) eminently presage hopes of Recovery.

VII. Although the Lord of the eighth may come to the *Quartile*, or *Opposition* of *Saturn* or *Mars*, yet the Sick may recover, and so much the more, if they be in their own Houses, or dispose of the Direction, yea although they be Lords of the Ascendent.

CHAP. XIX.

The Radical Prognosis of Death.

I. **T**HE Luminaries to the *Conjunction* or *Opposition* of one another, in violent Signs, or to the Bodies of a violent fixed Star, of the first

or second Magnitude; (as to *Caput Medusæ* in 21 ♀. the *Pleiades* in 25 ♀: *Aldebaran* in 5 ♀: *Castor* in 16 ♀: *Hercules* in 19 ♀: *Præsepe* in 3 ♀: *Cauda Leonis* in

17 ♄. *Lanx Australis* in 10 ♀ : *Frons Scorpij* in 29 ♀ : *Cor Scorpij* in 5 ♄ :) preſage Death, and more eſpecially in the Aſcendent or eighth.

II. The Hylegs to the *Conjunction*, *Quartile* or *Oppoſition* of *Saturn* or *Mars*, (being Lords of the eighth) or Lord of the eighth, or Planet in the eighth, preſages Death.

III. The ſame if the L. of the Aſc. or tenth; or Planets poſited therein be directed to the ☐ or ☿ of ♀ or ♂; and this judgment is often true, whether ♀ or ♂ be Lords of the eighth or no.

IV. The Hylegs to the *Quartile* or *Oppoſition* of the Lord of the ſixth, or Cuſps of the ſixth or eighth; or violent fixed Stars, ſhew great danger of Death.

V. If at the time of theſe evil

Directions (in any Diſeaſe) evil Tranſits of *Saturn* or *Mars*, or Lord of the eighth, ſhall accompany them, the Judgment is ſo much the firmer.

VI. If theſe evil Directions fall in the tenth Houſe, the Sick will be in danger of being kill'd by the Phyſick; if in the ſeventh, by the Phyſician.

VII. If *Saturn* or *Mars* or Lord of the eighth, come to *Conjunction* of any of the Hylegs, or Planet in the Aſcendent, the Sick infallibly dyes, unleſs that Hyleg diſpoſe of the place of the Direction; or be very much ſtronger in the Radix.

VIII. A Significator of life (if it be but) to the *Quartile* of a weak, or light, or retrograde Planet, yet if it falls in the eighth ſhews danger of Death.

CHAP. XX.

The Radix compared with the Decumbiture.

I. IF *Saturn* be Lord of the Aſcendent in the Radix, the Sick may live, although the Moon be in *Conjunction* or *Oppoſition* with him at the Decumbiture.

II. If the Moon be in the Radical place of *Saturn*, at the Decumbiture, if the Diſeaſe come of Cold, ſhe will much augment it; the like of *Mars*, if

of Heat: and this is dangerous.

III. If ſhe be in the Radical place of *Jupiter* or *Venus*, it is good, and ſhews Recovery, unleſs they be Lords of the eighth, or poſited therein.

IV. If the Cuſp of the Aſcendent in the Radix, be the Cuſp of the eighth in the Decumbiture, or contrariwiſe, it is dangerous; but if it be the Cuſp of the

the tenth, or do ascend, it is good.

V. If the Moon, at the Decumbiture, be in *Quartile* or *Opposition* to an Infortune in the *Radix*, the Cure will go on very hardly. *Lilly*.

VI. If the Moon or Lord of the Ascendent in the Decumbiture, transfit the Cusp of the eighth, or body of its Lord, or Planet therein, it is very dangerous.

VII. If upon a Critical day the Moon, or Lord of the Ascendent in the Decumbiture, meets with the *Conjunction*, *Quartile* or *Opposition* of the Lord of the

eighth in the *Radix*, it presages Death.

VIII. If the Ascendent of the Decumbiture be the Cusp of the fourth, sixth, seventh, eighth or twelfth of the *Radix* (the Ascendent of the Revolution not being the same) it shews difficult Recovery. *Lilly*.

IX. If at the Decumbiture, the Moon be in the 4, 6, 7, 8 or 12. and at both times an Infortune be there, it shews Death, unless a Fortune at one of the times assist with his benevolent Beams. *Lilly*.

CHAP. XXI.

Of the Radical Revolutions and Judicatives.

I. **W**HEN the Judgments of a Disease are drawn from the *Radix*; in this case it will be necessary always to consider in all acute Diseases, the preceeding Lunar Revolution; and in Chronick, the preceeding Solar; with the same relation, as if they were Figures of the Decumbiture.

For although the Revolution cannot be said to be the true Decumbiture, or lying down of the Sick; yet it may be truly said to be the Inchoature, or Exortum of the Sicknes, from which (as from a Fountain) it may derive its being.

II. The Judicative is that which shews the suddain change of the Disease either to Health or Death.

It is derived à *Judicando*, *ex jus & dico*, to judge or speak rightly, from whence those days are called *Judicativi*, the days wherein a man may judge or forebiew the future event of the Disease.

III. These Judicatives are derived, in acute Diseases, from the Lunar Revolution, but in Chronick from the Solar.

Acute Diseases are absolved in a months space, at farthest by Sect. 10, 11, 12. cap. 13. Chronick, sel.

seldom before the first 90 days from the Exortum. And what we hinted at the 15, and 16 sect. of Cap. 13. may be understood here.

IV. Of Judicative days, some are called, first *Præjudicati*, which are when the Sun or Moon comes to the *Semisextile* of their places at the *Exortum*, wherein the Disease is made manifest: secondly *Judicati*, which are when *Sol* or *Luna* comes to the *Sextile* of their places at the *Exortum*, at what time the Disease is either increased or remitted, from whence an evil or good Judicative may be afore-judged: thirdly *Judicatiui*, which are when *Sol* or *Luna* comes to their *Quartil*, on

which days, Diseases are generally judged.

V. Judicatives are either *Salvæ* or *Letales*.

VI. *Salvæ*, a safe Judicative, is when it coheres with the *Radix* and *Exortum*, and so as that the Significators of Life both in the *Radix* and *Exortum*, are free from Affliction or Impediment by Sign, Aspect, or House.

VII. *Letalis*, a mortal Judicative, is when it disagrees from the *Radix* or *Exortum*, or both by *Quartile* or *Opposition*, and the principal Significator of Life, in the eighth, or applying to *Quartile* or *Opposition* of the Lord of the eighth, or disposed of by him.

CHAP. XXI.

To draw the Judicative Figure; and to find out the true Beginnings of Judicative Times, and Revolutions.

I. MAKE a Figure of twelve Houses, and rectify the place of *Sol* or *Luna* to the Time of the *Exortum*, and set that Sign, Degree and Minute on the Cusp of the Ascendent.

II. To the Cusp of the Ascendent add thirty Degrees, you have the Cusp of the second;

and so continually add thirty Degrees, till you come to the twelfth.

III. This done, know the Ascendent is the place of *Sol* or *Luna* at the *Exortum*: the Cusp of the second the first *Præjudicate*: the Cusp of the third the first *Judicate*: the Cusp of the fourth the

the first *Judicative*, &c. round the Figure.

IV. And the better to observe all Transits, place the Planets therein, in their true places.

V. To find the true *Judicative Time* do thus : first, observe the Sun or Moons Diurnal Motion : secondly, the difference between their places in the *Judicative*, and next less in the *Ephemeris* : Then say As the Diurnal Motion is to 24 hours ; so is the aforesaid difference to the true time of the *Judicative*, afternoon the same day.

All which you may perform either by Logist. Logarith. or naturally, by Sect. 8, 9. Cap. 14.

VI. The aforegoing Rule may also serve very well to find the true time of the *Exortum* or Revolution : but for the farther

ease of the more unskilful, we have hereunto annexed *Argol's* Table which is more expeditious, and not much less exact in Solar Revolutions.

VII. The Use whereof is this ; Enter with the years of Birth compleat on the left hand, with the Sign on the Head, and in the common Angle you have Hours and Minutes, which if you add to the Time of Birth (casting away 24 hours, if it exceed) you have the Time of the Solar Revolution.

Where note, if you find not your compleat number of Years ; you must enter the Table twice, or more, with those numbers whose sum is your number of years compleat, adding all those several hours and minutes to the time of birth, as aforesaid.

Tabula Revolutionum.

Anni.	♈		♉		♊		♋		♌		♍	
	b	m	b	m	b	m	b	m	b	m	b	m
1	5	48	5	48	5	48	5	48	5	48	5	49
2	11	37	11	36	11	36	11	36	11	37	11	37
3	17	26	17	25	17	24	17	24	17	25	17	26
4	23	14	23	13	23	12	23	12	23	13	23	14
5	5	3	5	1	5	0	5	0	5	1	5	3
6	10	51	10	49	10	48	10	48	10	50	10	52
7	16	40	16	36	16	36	16	36	16	38	16	40
8	22	28	20	26	22	24	22	24	22	26	22	29
9	4	17	4	14	4	12	4	13	4	15	4	17
10	10	5	10	2	10	0	10	1	10	3	10	6
11	15	54	15	50	15	48	15	49	15	51	15	55
12	21	42	21	38	21	37	21	37	21	39	21	43
13	3	31	3	27	3	25	3	25	3	27	3	32
14	9	19	9	15	9	13	9	13	9	16	9	20
15	15	8	15	3	15	1	15	1	15	4	15	9
16	20	56	20	51	20	49	20	49	20	52	20	58
17	2	45	2	40	2	37	2	37	2	40	2	46
18	8	33	8	28	8	25	8	25	8	29	8	35
19	14	22	14	16	14	13	14	13	14	17	14	24
20	20	10	20	4	20	1	20	1	20	5	20	12
30	6	16	6	6	6	1	6	2	6	7	6	18
40	16	31	16	9	16	2	16	3	16	10	16	24
50	2	26	2	11	2	2	2	3	2	13	2	30
60	12	31	12	13	12	3	12	4	12	15	12	37
70	22	36	22	15	22	3	22	5	22	18	22	53
80	8	41	8	17	8	4	8	5	8	20	8	49
90	18	47	18	19	18	4	18	6	18	23	18	55

Note, This Table is made for the beginning of every Sign : if therefore the Revolution falls in any other place, as the 2, 3, 4, 5, or 6 face thereof, you ought to make proportion for the same ; which, the difference being small, you may easily do at sight.

Tabula Revolutionum.

An. 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 30 40 50 60 70 80 90	♈		♉		♊		♋		♌		♍	
	b	m	b	m	b	m	b	m	b	m	b	n.
1	5	49	5	49	5	49	5	49	5	49	5	49
2	11	38	11	38	11	38	11	38	11	38	11	38
3	17	27	17	28	17	28	17	28	17	28	17	27
4	23	16	23	17	23	18	23	17	23	17	23	16
5	5	5	5	6	5	7	5	7	5	6	5	4
6	10	54	10	56	10	57	10	57	10	55	10	53
7	16	43	16	45	16	46	16	46	16	44	16	42
8	22	32	22	34	22	36	22	36	22	34	22	31
9	4	21	4	23	4	25	4	25	4	23	4	20
10	10	10	10	13	10	14	10	14	10	12	10	9
11	15	59	16	2	16	4	16	4	16	1	16	58
12	21	48	21	51	21	53	21	53	21	51	21	48
13	3	37	3	41	3	43	3	43	3	40	3	36
14	9	25	9	30	9	32	9	32	9	29	9	25
15	15	14	15	19	15	22	15	22	15	18	15	13
16	21	3	21	8	21	11	21	11	21	8	21	3
17	2	52	2	58	2	1	2	1	2	57	2	51
18	8	41	8	57	8	50	8	50	8	46	8	40
19	14	30	14	36	14	40	14	40	14	35	14	29
20	20	19	20	26	20	29	20	29	20	24	20	18
30	6	29	6	38	6	43	6	43	6	37	6	27
40	16	39	16	51	16	58	16	58	16	49	16	36
50	2	48	3	4	3	12	3	12	3	1	2	45
60	12	58	13	17	13	27	13	27	13	14	12	54
70	23	8	23	30	23	41	23	41	23	26	23	3
80	9	17	9	43	9	56	9	56	9	38	9	12
90	19	27	19	55	20	00	20	10	19	51	19	21

But note, that if you proceed the
arithmetical way, it will be neces-
sary, that you use the same Tables in
finding your Revolutions and Judi-
catives, which you did in the Ra-
dical Figure; otherwise you will err
egregiously in the true time sought
after, as reason may inform you.

CHAP. XXIII.

Prognosticks from Revolutions and
Judicatives.

I. **T**HE Aphorisms which we have delivered in judging of the Decumbiture may indifferently serve here; as also Comparing the Radix with the Revolution (preceeding any Sickness) by Chap. 20.

The Prognosticks of Judicatives follow.

II. If the Sun or Moon or Cusp of the Ascendent in the Radix or Exortum be well aspected of good Planets upon a *Judicative* day, it goes well with the Sick; & *vice versa*.

III. If the Sun or Moon (according as the Exortum is either Solar or Lunar) be strong when they come to the *Judicative*, the Sick will recover, & *contra*: and if they be in aspect of Planets having little or no Latitude, the *Judicative* will be firm, be it good or bad.

IV. See what House that Planet the Sun or Moon meets with, at the *Judicative*, is Lord of, or posited in at the Decumbiture, and judge accordingly; if it be Saturn or Mars, or a Planet posited in the fourth, eighth or twelfth, let the Sick prepare for Death: and contrariwise.

V. For the *Judicative* Time is always an evil time, and if the

Sun or Moon, or Ascendent; or all of them, be then afflicted, the hope of Recovery is small, by Sect. 7. Cap. 15.

VI. If Sol or Luna on *prejudicate*, *judicate*, and *judicative* days meet with the good beams of Jupiter or Venus, or Planets posited in the Ascendent, Medium Cœli, third, fifth, ninth, or eleventh Houses, Health is a coming.

VII. The Moon afflicted or void of Course, or eclipsed upon a *judicative* day, is very dangerous.

VIII. If upon the *judicative* day the Sun or Moon transit the Bodies or evil Aspects of evil Planets in the Radix or Exortum, or both, it is very dangerous: & *contra*.

IX. Direct the Radix, and consider what Direction was in force at or near the time of the Exortum and Decumbiture (in this case the day of falling sick is enough to be known) and according to the Nature and Quality of the Direction, the Sign and House it falls in, and the Exortive Transits then occurring judge of the Disease, its Nature, Quality, Continuance and End.

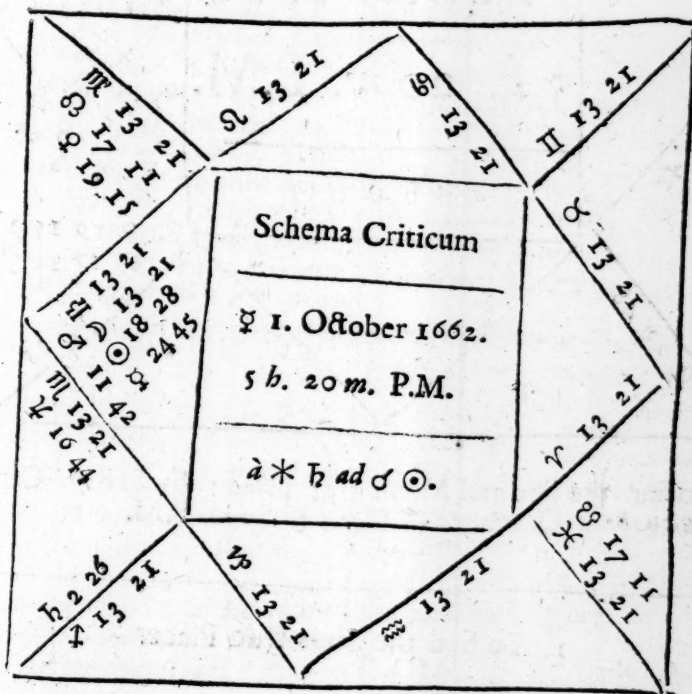
X. Lastly, upon *judicative* days

days, if there be good *Exortive* *Transits*, and good radical *Transits* (relating to the *Significators of Life*) the Sick may recover, although the Sun, Moon or

Ascendant be then afflicted; but the judgments will be more firm if they be not afflicted: and contrariwise.

CHAP. XXIV.

The former Rules illustrated by an Example.



WHAT we have hitherto delivered by Precept, we now come to clear by Example.

Q 3

De-

The Figure of the Decumbiture, or first lying down:



I. To find the Sun and Moon true place: by Sect. 7. Cap. 14.
Fell Sick the 1 October 1662. at 5 h. 20 m. P.M.

I. To find the Suns true Place.

The Sun's place at Noon — 18. 15 ☿:

His Diurnal Motion — 60 min.

As 24 hours Compl. Arith. — 6021

To 60 minutes, the Diurnal Motion 0000

So 5 hours 20 min. time from noon 10512

To 13 m. 20 s. the part proportional 6533

Which 13 min. are to be added to his place at Noon.

2. By

Or, By the Sexagenary Table, thus;

$$\begin{array}{r}
 60 \times \left\{ \begin{array}{l} 5 \\ 20 \end{array} \right\} = 5 \quad 20 \text{ (13m.} \\
 \quad 24) \quad 5 \quad 12 \\
 \hline
 \quad 24) \quad \quad 8 \text{ (20f.}
 \end{array}$$

2. To find the Moons true Place.

The Moons place at Noon. \approx 10 41
Her Diurnal Motion ——— 12 0
As 24h. to 12d. so 5h. 20m. to 2d. 40

1. By the Logistical Logarithm. at
 Sect. 7. Cap. 14.

As 24 hours, Compl. Arith. — 6021
 To 12 degrees ————— 6990
 So 5 hours 20 minutes ——— 10512
 To 2 gr. 40 minutes ——— 23523

2. Or thus by the Sexagenary Table,

$$\begin{array}{r}
 12 \times \left\{ \begin{array}{l} 5 \\ 20 \end{array} \right\} = 1 \quad 4 \text{ (2d} \\
 \quad 24) \quad 0 \quad 48 \\
 \hline
 \quad 24) \quad \quad 16 \text{ (40m}
 \end{array}$$

Which 2 d. 40 m. added to \approx the rational Figure:

0. 41. makes \approx 13. 21 her true
 place at the Decumbiture.

And to 5 hon. 20 min. we draw

II. To find out truly the Cri-
 tical Times: by Sect. 8, 9.
 Cap. 14.

A View of the several Crises.

Critici	Loc. D	Temp. Incid.	Punc. Af.
1 Indic.	III 13 21	3 Oct. 17 29	12 7 40
1 Inter.	♂ 13 21	6 Oct. 6 8	19 13
1 Crifis	wp 13 21	8 Oct. 17 35	12 7
2 Indic.	≈ 13 21	11 Oct. 2 6	wp 26 50
2 Inter.	⋈ 13 21	13 Oct. 7 59	9 1 20
2 Crifis	γ 13 21	15 Oct. 8 18	9 6 48
3 Indic.	δ 13 21	17 Oct. 7 52	9 3 4
3 Inter.	II 13 21	19 Oct. 7 28	II 29 30
3 Crifis	⊖ 13 21	21 Oct. 9 20	9 23 38
4 Indic.	Ω 13 21	23 Oct. 14 45	12 22 44
4 Inter.	12 13 21	25 Oct. 23 46	wp 4 6
4 Crifis	⊖ 13 21	28 Oct. 11 32	Ω 22 35
⊙ Indic.	III 18 28	31 Oct. 8 24	⊖ 20 42
⊙ Inter.	♂ 18 28	29 No. 16 55	III 12 50
⊙ Crifis.	wp 18 28	29 Dec. 1 59	II 22 30

We will take for example the
first lunar Crisis in wp 13. 21.

1. By the Logistical Logarithms, at the Sect. 8. Cap. 14.

Place at Decum. in ⊖ 13. 21

As 12 gr. 18 m. Comp. Arithm.

Place 8 Octob. at Noon wp 4 22

To 24 hours - - - - - 3118

Her Diurnal Motion - - - 12 18

To 24 hours - - - - - 3979

Difference à Decubit. - - 9 1

So 9 gr. 1 min. - - - - - 8231

As 12 d. 18 m. to 2 h. 50 d.

To 17 gr. 35 min. - - - - - 15328

1 m. 40 17 h. 35 m.

2. Or thus by the Sexagenary Table.

$$24 \times \left\{ \begin{matrix} 9 \\ 1 \end{matrix} \right\} = 3$$

$$36 \quad 24 \quad (17 \text{ h})$$

$$3 \quad 24$$

$$5 \quad 6$$

$$42 \quad 18) \quad 3 \quad 29 \quad 6$$

$$7 \quad 18 \quad (35 \text{ m})$$

$$7 \quad 11$$

$$7 \quad R.$$

Syzygy

A View of the several Crises.

Syzyg. ☽	Radical Transits.	Transitus Decubit.
ad ♂ ♂	☉ ad ♂ ♀: ♀ ad * ♀	☽ ad ♂ ♀: ☉ ad ♂ ♀
ad * ☉	☉ ad ☐ ♀: & ♂ ♂	☽ ad ♂ ♀: ☽ ad ☐ ♀
ad * ♂	♀ ad A. ♀ ad ♀ ☽	♂ ad ♂ ♀: ☽ ad M C
ad ☐ ♀ ♂	☉ ad Δ ☉	♀ ad ♂ ☉: ☽ ad Δ ☉
in Δ ♀	☽ ad ☽: ♂ ad ♂ ♀	☽ ad Δ ♂: ♂ ad * ♀
ab ♂ ♀	♂ ad Δ ♀: ♀ ad ♂ ♀	☽ ad Δ ♀: ☽ ad ♂ ☉
ad ♂ ♀ ♂	♀ ad ♂ ♀	☽ ad ♂ ♂: & ad ♂ ♀
in Δ ♀	♀ ad * ♀: ☉ ad Asc.	☽ ad Δ ☉: ☽ ad ♂ ♀
ad ☐ ♀	♀ ad ♂ ☽: ♂ ad ♂ ☽	♀ ad ♂ ☽: ☽ ad Δ ♂
ad * ♀	♀ ad D 12: ☉ ad ☐ ♀	☉ ad ♂ ♂: ☽ ad Δ ♀
in * ☉	♀ ad Δ ♀: ♀ ad Sp ☽	♀ ad ♂ ☉: ☽ ad ☐ ♀
ad * ♀	♀ ad ♂ ♂	☉ ad ♂ ♀: ☽ ad ♂ ☉
ad ♂ ☉	☉ ad ♂ ♀: ☽ ad ♂ ♀	♂ ad ♂ ♀: ☽ ad ♂ ♀
in ♂ ♀ ♀	☉ ad ☐ ♀: ♂ ad Δ ♀	☽ ad ♂ ♀: ♀ ad ♂ ♀
ad ♂ ♀	♀ ad Δ ♀	☽ ad M C: ♂ ad * ♀

So that it appears that the first Crisis happened at about 17 hours, 35 min. And after the same manner you must take the rest.

Where note, That a little Practice, will make the use of the Sexagenary Table as facile as any other way whatsoever.

III. To find out the Solar or Lunar Revolution: (by Sect. 9. Cap. 14. and Sect. 5, 6. Cap. 22.)

We will find the preceding Solar on 7 Junii 1662.

☉ place 7 Jun. at noon II 26 16
His Diurnal Motion - - - 0 57
Differentia à Radice - - - 0 29
As 57 m. to 24 h. so is 29 m. to 12 h. 13 m.

1. By the Logistical Logarith.
As 57 min. Comp. Arith. -- 777
to 24 h. - - - - - 3979
so 29 m. - - - - - 3158
to 12 h. 13 m. - - - - - 7914

2. Or thus by the Sexagenary Table:

$$24 \times 29 = 11 \ 36 \ (12 \ h.)$$

$$57) 11 \ 34$$

$$57) 12 \ (12' \ 38'')$$

So that 7 Jun. about 12 h. 13. m. P.M. is the time of the Revolution.

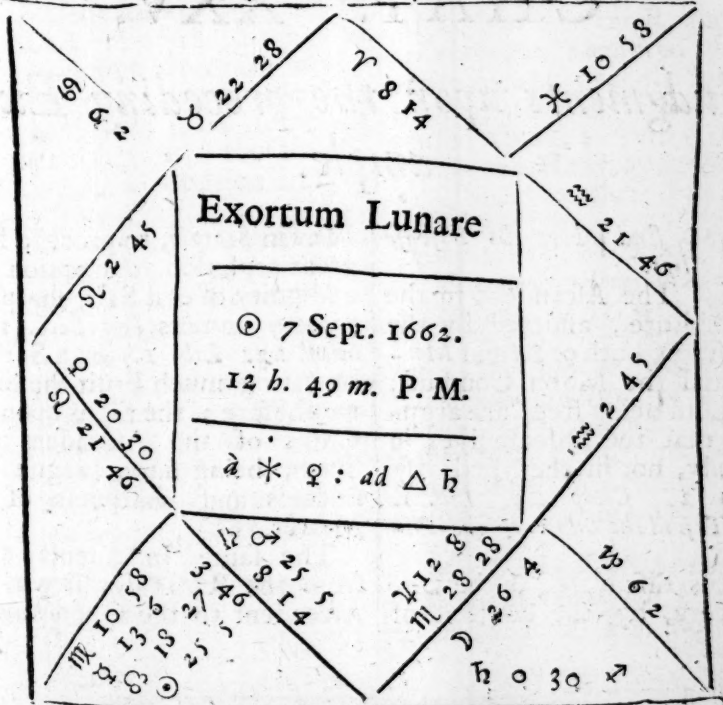
To find the preceding Lunar Revolution on Sept. 7. 1662.

☽ place at noon 7 Sept. III 19 54
Her Diurnal Motion - - 11 33
Differentia à Radice - - - 6 10
As 11. 33. to 24 h. so 6. 10. to 12 h. 49 m.

1. By the Logistical Logarith.
As 11 gr. 33 m. Comp. Arith. 2844
to 24 ho. - - - - - 3979
so 6 gr. 10 m. - - - - - 9881
to 12 h. 49 m. - - - - - 6704

Or

Syzyg. D	Lunar. Exor. Transf.	Solar. Exort. Transf.
in σ h	σ ad σ ψ : \odot ad \ast \odot	D à σ ψ : \odot ad \square D
ad \square q	\odot ad σ σ : q ad σ \odot	D ad ρ \odot : D ad \ast ψ
in \square \odot	q ad \ast h :	\odot ad Δ \odot : D ad MC
ad Δ \odot	q ad σ ψ : q ad \oplus	D à \ast σ : D ad \square h
ad Δ h	σ ad \square q :	σ ad Δ D : D ad \square \odot
ad ρ \odot	q ad IC.	\odot ad σ ψ : D ad ρ h
ad ρ h	q ad \square q : ψ ad \square q	D ad \square σ : $\&$ ρ h
ad Δ \odot	σ ad \ast \odot : \odot ad \ast \odot	D ad σ \odot
ad Δ σ	σ ad σ D : q ad σ D	q ad ρ \odot : $\&$ Δ σ
ad \square σ	q ad σ h : q ad Spm	σ ad \square σ : \odot ad ρ q
ad \ast σ	q ad \ast q : \odot ad \ast q	σ ad σ h : ψ à Δ D
in σ q	σ ad σ h : q ad σ σ	D ad \square D : $\&$ Δ \odot
in σ h σ	D ad \ast \odot : $\&$ σ D	D ad σ h : σ ad σ h
ad Δ q	D ad ρ D	D ad ρ D : $\&$ Δ σ
in \square ψ	D ad Δ \odot : ψ ad \square σ	D ad Δ \odot : $\&$ ρ σ
ad Δ ψ	D ad \ast q : $\&$ Δ D	σ ad MC : D ad A/c.



2. Or thus by the Sexag. Tab.

$$24 \times \left\{ \begin{smallmatrix} 6 \\ 10 \end{smallmatrix} \right\} \begin{array}{r} 2 \ 22 \ 00 \ (12 \ h. \\ 2 \ 12 \\ 6 \ 36 \\ \hline 2 \ 18 \ 36 \\ \hline 9 \ 24 \ 00 \ (48' \\ 9 \ 14 \ 24 \\ \hline 9 \ 29 \ R. \end{array}$$

$$\begin{array}{r} 2 \ 12 \\ 6 \ 36 \\ \hline 2 \ 18 \ 36 \\ \hline 9 \ 24 \ 00 \ (48' \\ 9 \ 14 \ 24 \\ \hline 9 \ 29 \ R. \end{array}$$

$$\begin{array}{r} 2 \ 12 \\ 6 \ 36 \\ \hline 2 \ 18 \ 36 \\ \hline 9 \ 24 \ 00 \ (48' \\ 9 \ 14 \ 24 \\ \hline 9 \ 29 \ R. \end{array}$$

So that I conclude that 12 h. 49 m. is the time of the Lunar Revolution. To which Punſts of Time, we have drawn the aforeſaid Revolutions, both Solar and Lunar.

IV. To obſerve the Tranſits of the Radix, Decumbiture, Solar and Lunar Exortum.

In this caſe let thoſe Scheams ſeverally be drawn into Speculums,

then take notice every day that you deſire to know what Tranſit occurs, in what place each ſignificator is poſited in the Ephemeris, and compare the ſame with your Speculum; if it paſſeth by any principal point, take notice of it.

After this Method we compleated the ſixth and ſeventh Columns of the two preceding Tables, all which is eaſy to perform; and he which ſhall obſerve but this thing only, nay, if it be but the Tranſits of the Decumbiture or Radix alone, ſhall not enough wonder, at the admirable and wonderful Harmony and Product of Celeſtial Significations, which will ſo ſtrangely diſcover the Increate or Decrease of the Diſeaſe, according as thoſe Tranſits be good or evil.

CHAP. XXV.

Judgments upon the preceding Example.

I. **T**O find where the Diſeaſe lies.

The Aſcendent in the Decumbiture, afflicted by the Oppoſition both of Sol and Mercury, and the Moon Combust, their Lord being free, are arguments that the Diſeaſe lyes in the Body, not in the Mind, by Sect. 1. 2. Chap. 24. Lib. 1.

II. To find the Cauſe of the Diſeaſe.

This is diſcovered in the Decumbiture, by the Poſition of

Mars in Scorpio, to proceed from great repletion, corruption and malignity of evil Salt, ſharp and watery humors (by Sect. 1. 2. Chap. 23. Lib. 1.) or a Surfeit, by eating much Fruit the Summer before; the Signs upon the Cuſps of the Aſcendent and Sixth, being fiery, argue the ſaltneſs and ſharpneſs of the Matter.

The ſame Judgments ariſe from the Radix, for it was the Aſcendent to the Oppoſition of

Jupiter in *Scorpio*: Then *Mars*, and *Jupiter* himself, the Author of the Disease, transiting also the Radical Ascendent, the which also he did at the times both of the Solar and Lunar Revolutions.

In the Solar Revolution, *Mars* Lord of the Ascendent is not only in *Leo* a fiery Sign, but also in the Sixth House: In the Lunar, the Cusp of the Sixth in the Solar Ascends; and *Saturn* Lord of the Sixth, is just got into *Sagittarius*: From whence judge the Disease arose, not only from moisture, but also heat and corruption.

III. To judge the greatness of the affect.

In the Decumbiture, the Lord of the Ascendent in *Scorpio*, applying to the Conjunction of *Jupiter*: the Moon Combust of the Sun Lord of the Sixth; in the Aerial Sign *Libra*, argues the affect to be so great as to afflict the whole Body; and so much the more because of the Transit of *Sol*, by the Opposition of *Saturn* in *Libra*, by *Lib. I. Chap. 12. Sect. 4. and Lib. I. Chap. 18. Sect. 4. l. i. c. 27. f. 5. & l. i. c. 29. f. 7.* In the Radix there is the Ascendent to the ♀ ♀ in *Scorpio*: in the Solar Exort. *Sol* is in *Gemini*, and the Moon in *Cancer*: in the Lunar, both *Jupiter* and the Moon, are in *Scorpio*, and *Mars* in *Libra*; the effect must needs be great, by *Lib. I. Chap. 29. Sect. 7. afore-said.*

IV. To determine the humor abounding.

This may sufficiently be determined by what we have even now already said, to be partly corrupted Blood inflamed, and partly phlegm, by *Lib. I. Chap. 18. Sect. 4. and Lib. I. Chap. 26. Sect. 4. and 5.*

V. To determine the Parts of the Body afflicted.

The principal parts afflicted were the Head, Heart and Back, by *Lib. I. Chap. 27. Sect. 8. and Lib. I. Chap. 2. Sect. 1. 5. and 7. and were essentially afflicted by Lib. I. Chap. 27. Sect. 2. but the effect was so great, that all the Body was universally afflicted by Accident (by Lib. I. Chap. 27. Sect. 3. and 5. and Chap. 29. Sect. 7.) for in the Decumbiture *Aries* ascended, *Leo* was upon the Cusp of the Sixth, and *Luna* was Combust of *Sol* in *Libra* in Opposition to the Ascendent: in the Radix *Jupiter* and *Mars* Transited the Ascendent, and near the place of the Opposition of *Jupiter*, which caused almost a Frenzy, by afflicting the Head, by *Lib. I. Chap. 21. Sect. 1. 3. 4. Mercury* at the same time transiting the Opposition of *Mars*: In the Solar Exortum, *Aries* was on the Ascendent, *Mars* with *Regulus*, in *Leo*, in the sixth; and on *October 3.* the Sun and Moon came to the Conjunction of *Mercury*, in the VII. in Opposition to the Ascendent: In the Lunar, *Leo* Ascends, and *Jupiter* (Author of the Disease) Transits the Ascendent.*

VI. To determine the Disease.

It might very well be judged to be the Small Pox (as indeed it

it was) or else some other Disease near of kin to it, by what we have already said, by *Lib. 1. Cap. 2. Sect. 1. and 5. Lib. 1. Cap. 4. Sect. 2. and 4. Lib. 1. Cap. 11. Sect. 5. Lib. 1. Cap. 15. Sect. 4. Lib. 1. Cap. 18. Sect. 4. Lib. 1. Cap. 12. Sect. 4. Lib. 1. Cap. 28. Sect. 3. 12. and 14.* For in the Decumbiture the Moon coming to Conjunction of the Sun in *Libra* could do no less than give a violent Fever, and *Jupiter* and *Mars* in *Scorpio* Irruptions of the Skin, by *Lib. 1. Cap. 28. Sect. 12.* In the Radix *Jupiter* and *Mars* transited its Ascendent, and the Ascendent came to Opposition of *Jupiter*, which might partly determine the Disease, by *Lib. 1. Cap. 33. Sect. 1. 3.* In the Solar Exortum the Sun came to the σ of Δ in *Cancer*, and the Moon to Conjunction with *Mars* in *Leo*, which gives the Small Pox, by *Lib. 1. Cap. 30. Sect. 8. Lib. 1. Cap. 31. Sect. 3. and by Lib. 1. Cap. 11. Sect. 2. and Cap. 12. Sect. 4. and Cap. 35. Sect. 8. 11. and 12.*

VII. To discern whether the Disease be curable or not.

In the Decumbiture *Mars* Lord of the Ascendent (in *Scorpio*, disposing of *Jupiter*, Lord of the Eighth) is the strongest Planet in the Figure, and is a good Token, although the Moon applyed to Conjunction with the Sun, and *Mars* to Conjunction with *Jupiter*, by *Lib. 2. Cap. 6. Sect. 1. and 4.* In the Radix, the Ascendent to Opposition of *Jupiter* could not kill, he being Lord of no evil House in the

Nativity. In the Lunar Exortum were signs of Recovery, notwithstanding the Moons coming to Conjunction with *Saturn* Lord of the VIII, *Mars* to Conjunction with *Jupiter*, and the Sun to Conjunction with *Mars* in the Lunar Exortum, were all dangerous; yet because of the strength of *Mars* at the Decumbiture, and the Transits of *Mars* to the Radical Trine of *Sol*; and *Sol* to the Radical Sextile of *Luna*; and *Venus* to the Medium *Cæli*, at the Lunar Exort; and *Mars* to the Radical Medium *Cæli*, in the Solar Exort; and because that in neither of those preceding Revolutions, any of the Radical or Exortive Significators of Life were in the Eighth, nor disposed of by the Lord of the Eighth, by *cap. 6. sect. 1. and 3. cap. 8. sect. 5. and cap. 18. sect. 1. and 3. of this Book*; judgment was given that the Disease would end in Life, and so it did.

VIII. To discover whether it will be long or short.

In the Decumbiture the 15. *Leo* on the sixth, and *Mars* in 12. *Scorpio* in the Radix *As. ad Oppositionem Jovis* in 20 *Scorpii* in the Solar Exort: *Jupiter* in 4 *Scorpii*, and 3. *Leo* on the sixth: in the Lunar Exort. 3. *Leo* ascending, *Sol* Cadent and *Saturn* Lord of the sixth, newly entred into the Common Sign *Sagitary*, were all Signs of an extream sharp Disease, and very long: by *cap. 3. sect. 17. cap. 5. sect. 2. 3. 4. 5. and 9. Cap. 17. sect. 6. 9. and 11. of this Book.* It continued about 13. weeks.

IX. To give judgment of the Critical days, by Chap. 15.

Upon the first Indicative, viz. *Octob. 3.* the Sick was speechless, yet the Disease began to manifest it self: the Intercidental presaged an evil Crisis: on 8. *October* the Critical day, the sick was much disturbed in the Brain, the Feaver strangely encreased, so that Life was despaired of, at that time *Mars* Lord of the Ascendent transited Conjunction of *Jupiter*, Lord of the Eighth; but *Luna* ad M.C. gave hopes again: the 11. *October* the Feaver abated, and the Pox fell in: on the 13. the Feaver encreased, and dangerous signs appeared, thereby presaging an evil Crisis: the 15 day being Critical, the hope of Life was small, the Pox came out as it were again anew, at what time *Luna* came to the Conjunction of *Sol*, and *Jupiter* to the Opposition of *Jupiter*: upon the 17 day the Feaver more encreased, and death was every moment expected: the 19. day the sick continued the same: on the 21 day thence appeared some signs of Health: on the 23 day the Feaver was again excited: on the 26 *Luna*

to the Quartile of *Saturn*, fore-shews an evil Crisis: on the 28 day, being Critical, the fear of Death was not small, even till 31 *October* the Solar Indicative, a little after which the Feaver abated, and the Disease became Chronick; and upon the Solar Crisis, to wit, the 29 *December*, the sick went abroad again, at what time the Moon came ad M. C. and *Mars* to the Sextile of *Jupiter*. See Sect. 8. Chap. 15. of this Book.

X. And after the same manner must you run over the Prejudicate, Judicate, and Judicative days deduced from the Lunar Exortum, by Chap. 23. foregoing. All which being thoroughly considered, it is almost impossible you should miss the true judgments of a Disease.

We have been thus plain, because we would be understood; and this we have spoken in short; it would have required a Treatise alone to have compleatly discoursed this Example; yet we hope, we have said enough for an ordinary capacity to do the like, and laid a Foundation sufficient for others to build upon.

CHAP. XXVI.

The General Prognosis from the Symptoms of the Sick.

I. **T**HE natural Prognosticks are taken from, things *natural, non-natural* and *præternatural*.

II. The Disease is discerned to be long or short, curable or mortal, by the Strength, Constitution, Age, Season, Diet, Cause, Kind, and Symptoms of the evil; all which are to be noted in respect of the *Actions, Excrements* and *Qualities* of the Body of the Sick.

III. If the Body is repleat with strength the Sick, without doubt will escape, and not dye.

For none dyes so long as strength remains; but when that decays then Death ensues.

IV. To foresee the time of Death, note how much the strength of the Disease exceeds the strength of the Body, and the time of the greatest extremity; for if the Disease is much beyond the strength, so that Nature cannot subsist, Death will presently follow: but if otherwise it will be longer: and if Nature be strong enough to overcome the Malady, Health ensues.

V. And from hence it appears that all the other Signs of Life or Death, are no otherwise

Signs, but as they Indicate, or hold forth, the strength or weakness of Nature in the combat with the Disease.

VI. A CONSTITUTION, not too fat nor too lean, too hot nor too cold, too moist nor too dry, indicates great strength, and that Nature will overcome: but on the contrary that Nature may go by the worse: for these latter dye sooner than the former.

For in fat people the Veins are narrow and straight, having but little Blood and Spirits, so that Age or other inconveniencies occurring, the natural heat is soon extinguished; and contrarily lean people, more abounding in Blood and Spirits, more easily overcome: yet observe that leanness is soonest hurt, by external causes, fatness by internal.

VII. YOUTH hath more strength and natural heat than OLD-AGE; and so sickness is longer in Old people than in Young.

And the reason is, because they more abound with cold Humours, have a weaker digestion and decay of natural heat.

VIII. Diseases in the SPRING are less dangerous than Diseases in

in the HARVEST (which prove more often deadly :) The Summer shortens Sickness ; but the Winter prolongs it.

For in the Summer the Pores being open, the evil humors being stirred up and rarified by the heat of the Air are transpired, but in Winter being closed and condensed by cold they are retained within.

IX. A Dry SEASON is more wholesome, and not so deadly as a Rainy : for Dryness resisteth Putrefaction, Humidity causeth Superfluities, Excrements and Diseases : when the Season is constant, the Disease is constant ; but inconstant, the sickness is the more variable, and a dangerous Crisis is to be expected, from whence either Death, or the matter of a new Sickness may be looked for.

X. According to the Greatness of the CAUSE is the Greatness of the Disease : Hence a violent Cause against Nature, shews a great and dangerous or mortal sickness.

XI. Choler causes short and acute Diseases : Melancholy causes long Diseases, by reason of its Coldness, Dryness, and Thickness : Flegm shews mean Diseases between Choler and Melancholy.

XII. The KIND of the Disease is considered as it hath resemblance with the Nature, Constitution, Age and Sex, for here it is less dangerous, in regard it coheres with the Temper and Complexion of the Sick : but that is more dangerous which hath no affinity with the aforesaid Notions, because it proceeds of a much greater and stronger cause.

Exempli gratia. In two Burning Feavers equal in strength or greatness : that which falls out in Summer to a lean, young, hot constituted man, shall not be so dangerous as that which falls out in Winter to a fat, old cold complexioned person.

XIII. Gentle and mild Diseases are commonly long : sharp, acute, and fierce are ended within about 14 daies : extream hot in about 7 daies.

There can be no certain judgment of hot and sharp Diseases, by reason that as they on a suddain wax great, so in that extremity they as suddenly end, as well in life as in death : wherefore while the Humours are in motion suspend judgment, for it is not certain whether they will fall on a noble or ignoble part, within or without the Vessels.

XIV. If the Humour be staid in a certain place (known by critical Bubo's, Tumours, &c.) yet do not positively affirm The Sick shall escape, but with this provision, that no new change befall, and he follow the advice and prescription of his Physician.

XV. If a woman with child have a fiery or hot Disease, she is in apparent danger of Death.

For the hot Fever requirer a slender Dyet, which she cannot observe (lest the child, for want of nutriment, proves an Abort) in this case, she by too much eating encreases the Fever, and so brings her self into manifest danger.

XVI. In any other violent Disease, as the Epilepsy, Apoplexy, Convulsion, &c. it is almost impossible she should be ever able to overcome.

XVII. Lastly, there are two

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principal wayes left unto us (by the ancient Hippocrates) how to judge of Diseases : the first is by Accidents : the second by Cris.

CHAP. XXVII.

Presages by Accidents.

I. **T**O foretell the Event of the Disease, it is necessary to consider the part afflicted, whether it be noble or ignoble, publick or private, containing or contained ; for, from the Dignity and use thereof, judgment is to be drawn.

II. An undisturbed Fancy or Brain, and a good Appetite, are good signs, foreshewing Health.

The first shews the temperate disposition of the Brain, Marrow of the Back and Nervous parts, the latter the good disposition of the Stomach and Liver.

III. A disturbed Brain and bad Digestion are evil signs, shewing the Animal and Natural parts to be disaffected.

All such that are troubled with any pain in any part of the Body, and are not sensible thereof, have a disturbed Sense, Brain or Reason.

IV. To sleep in the night, and to wake in the day are good signs : but continual watching night & day will cause Distraction, or an alienation of the Mind.

V. Sleep over-much is also evil : for it shews extream Coldness of the Brain, which will cause a Lethargy, if the Brain be moist : or a Catalepsy, if it be dry.

VI. Much Sleep, in the Declination of a Disease (and trou-

blesom) foreshews Death.

VII. The Pulse is a faithful Witness of Life or Death ; for being great and strong, it signifies Vigor and Strength, on which Rock stand all hopes of Health : little and weak the contrary, from whence comes fears of Death.

VIII. The Inequality of the Pulse continuing is an evil sign : and its intermission in young folk is most dangerous, foreshewing present death, especially if it should proceed from an Obstruction of the Arteries.

IX. Free respiration and breathing is healthful, in all sharp and acute Diseases ; for it shews the Temperature of the Breast, and parts therein contained, and the natural Heat to be strong : and contrariwise, Difficulty of Breathing shews the Vital parts to be suffocated, and the Spirits almost extinct.

X. But the Respiration great and often, shews Inflammation of the parts within the Breast. And great and rare, shews a future alienation of the Spirit : so little and rare foreshews Death, for it proceeds from the Extinction of natural Heat, which is perceived by the coldness of the Breath, at Nostrials and Mouth,

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XI. A *strong Heart* is a good sign, for they that fall often into a *Lypothimy* or Swooning, without any manifest cause, wil in the end die suddainly, because of the weaknels of the Vital Spirits.

XII. *Excrements* well digested foreshew a good Crisis: but crude or raw, that either there will be no Crise, or that the Sick shall be in extremity; or the Disease shall continue; or, that it shall afterwards return; or that Death shall follow on it.

For if Nature proves *Vitrix*, the Digestion appears: the contrary when she is overcome.

XIII. So the Egestion; soft, equal, yellow, is well digested; but thin, watery, white, pale or of a dirt Colour is a sign of Indigestion. The Urine also mean in substance, Citrine, Sedement white, united, and equal, is singular good; but watery, small, white and much shining, or without sedement, it is raw and without Digestion.

XIV. *Excrements* like what they were in health, shew the Disease to be light: but if the difference be great the Disease is deadly.

XV. If they be black, livid or green and stinking (without a Crisis) they are mortal signs: the same if the Urine be black, thick and troubled. But if they be Critical, it is healthful.

XVI. *Sweats* in all sharp and acute Diseases (on Critical days) fore-shew Health: But other Sweats which bring no ease, are cold, and appear only about the Head, Face and Neck, are most evil, and in an hot, acute Fever,

foreshew Death: and in gentle Diseases the length thereof.

XVII. *Long cold Sweats* shew long Diseases: hot Sweats, short Diseases: as proceeding from a subtil Matter which in a short time will be diffipated.

XVIII. The *Countenance* like it self in Health is a good sign: but contrariwise evil: as, if the Nose is sharp, the Eyes hollow, the Temples fallen, the Ears cold and drawn in, the skin of the Face hard, extended and dry, its Color pale, black, livid or leaden, and it proceed of no manifest cause (as want of sleep, or meat; or a Flux of the Belly) it foreshews Death to be near.

XIX. When the Body is sometimes hot, sometimes cold, sometimes of one color, and then of another, it foreshews a long Disease: and this diversity of Mixtures, shews the Disease to proceed of variety of Humours: in the concoction whereof, Nature will require much time.

XX. The *Hypochondres* (that is the space under the short Ribs) on both sides soft, equal, fat, and without pain, are good signs, shewing the Temperature of the Epigastrick Muscles, the Mesentary, the Liver, Milt, and Stomach: and on the contrary it is bad.

XXI. The *Hypochondres*, gross, fleshy, & fat, are signs of strength, thereby augmenting natural Heat, by which the parts within being warmed, they digest better the Meat, and so makes better Blood.

XXII. Lastly, in these accidents of the Body, if you take no-

tice of a good sign, think not for that the Sick shall escape ; or of an evil sign that therefore he shall die : for a good may

be out weighed by an evil being great : and an evil may be overcome by a good being stronger.

CHAP. XXVIII.

Prefages by Crisis.

I. **T**HE Disease wholly leaves the Sick at once by way of *Crisis* : or by little and little by way of *Resolution*. Now *Crisis* is a suddain change of the Disease into Health or Death.

Of Crisis there are two sorts, the first is by Excretion by a Flux of Blood or Sweat, or a Flux of the Belly or Urine, or Vomit, the second by Abscess.

II. When there appears a Cloud in the Water, not only red but white, and yet rather a white Hypostasis or ground, united, and equal (if the Motion of the Disease be quick) it is a preface of the future *Crisis* :

III. When the *Crisis* draws near, the Night preceeding is very troublesome, but that which follows is ordinarily more easy : for while Nature is at work the Sick is troubled.

IV. The *Kind of the Crisis* is taken from the Disease, the part that is diseased, and the Nature of the Patient : for hot and acute Diseases are judged by Excretion ; cold and long by Abscess.

V. An Inflammation in the Gibbous part of the Liver causes the *Crisis* to be by a Flux of Blood at the right Nostril, or by a Flux of Urine : if the Inflammation be in the hollow part of it, expect the *Crisis* by Flux of the Belly, or Vomit, or Sweat.

VI. If the Brain and all the Head be inflamed, the *Crisis* is by an Hæmorrhagie at the Nose : if the Stomach and Mesentary, by Vomit or Flux of the Belly.

VII. A Flux of Blood falls oftener to young men, Sanguine or Cholerick, overtaken with a sharp Fever : but a Flux of the Belly to old men, Flegmatick or Melancholy.

Hitherto the general Prognosticks of a Crisis : the particular follow.

VIII. Redness of the Face, extream pain of the Head and Neck, beating of the Arteries in the Temples, Distention of the Hypochondres : Difficulty of Breathing, Dimness and Watery of the Eyes, Singing of the Ears, and Itching of the Nostrils, shew the *Crisis* to be by Flux of Blood at Nose.

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IX. A Heat and Heaviness of the Loyns, with a Pain and Extention of the *Hypogaster*, foreshew the *Crisis* to be by Flux of the Terms.

X. A Suppression of the Water, with a Pricking and Shivering of the whole Body, with Pulse soft and watery, and the outward parts of the Body hot and moist, shews the *Crisis* to be by Sweat.

XI. Wind, a bending of the Belly, and pain of the Reins shews the *Crisis* to be by Flux of the Belly.

XII. Loss of Appetite, Loathing of Meat, Pain at the Stomach, Soreness of the Head, Dimness of the Sight, great Spitting, Bitterness in the Mouth, and Trembling of the under Lip, shew the *Crisis* to be by Vomit.

XIII. When signs of Concoction hath gone before, and the motions of a *Crisis* hath been perceived, especially when the Sick feels an Heaviness in the *Hypogaster*, and a Heat about the end of the Yard (having made much thick Water during his Disease) he being also aged, the *Crisis* may be expected by Flux of Urine, if there appears no mark of a *Crisis* by Flux of Blood, nor of the Belly, nor by Sweat, nor by Vomit.

XIV. A Heaviness and Pain of the Head with deep Sleep, Difficulty of Breathing, with Deafness succeeding, without any manifest Cause, falling to one long sick, points out the *Crisis*

to be by an Abscess behind the Ear.

XV. If there be no sign of Equality, and that the Sick hath had his Urine of a long time, clear and undigested, having a Heaviness, Pain, Bending and Heat in the *Hypocondres*, the *Crisis* will be by abscess in the lower parts: if any part of the Body hath been lately hurt before, the Abscess or Aposteme shall be there.

Where note, that an abscess falls out most commonly in Winter, and often an imperfect *Crisis*.

XVI. That is a good *Crisis* which falls out with a manifest Excretion or a notable Abscess, and without dangerous Accidents.

XVII. A perfect *Crisis* is that which evacuates all the vitious Matter: an imperfect, that which voids but a part. The first is sure, but the latter ought not to be trusted to; for evil Humours remaining after a *Crisis* are wont to bring a Relapse.

XVIII. The *Crisis* is also known to be perfect and firm, by restoring the Functions, Natural, Vital, and Animal; by the Concoction of the Excrements; and by the Quality and Form of the Body reduced to perfect Health.

XIX. Lastly, trust not to any Ease which comes without Reason; nor fear evil Symptoms which arise without Cause; for the most part those are unconstant, and last not long.

For evil Symptoms ceasing without Evacuation by Hemorrhage, Vomit, Sweat, Stool, or Signs of Con-

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codition, is no assured Testimony of Health, but sometimes threatens greater Evils, or Death to follow : so also Difficulty of Breathing, Frensie, Madness, shivering, and Exasperation of the Fever, without

any foregoing Causes or Reasons, are not always to be accounted evil ; but contrariwise they oftentimes presage a good Crisis, and sudden Recovery.

CHAP. XXIX.

Prefages by the Parts of the Body in Acute Diseases.

I. IF the Face looks as it did in Health, there is hopes of Recovery ; but the Nose sharp, Eyes hollow, Skin of the Face hard, dry, and loose, as if 'twere tann'd ; Ears cold, shrunk and almost doubled, Face black, pale, or deformed, are signs of Death, if the Sick-ness hath been four or five days before the Symptoms ; and no Flux, nor Watching, nor Fasting did precede.

II. Loss of Eye-sight. Weeping against the will, one Eye becoming less than the other, looking as if they would fall out, the White becoming reddish, and the Eyes wax bleared, gashful, staring up and down, sunk into the head, squinting, sleeping with the Eyes open, and not so accustomed before (no Flux nor Purging preceeding) are certain signs of Death.

III. The Neck. Hands and Feet extended, stiff, and inflexi-

ble, suddain starting up out of the Bed, desiring to lye at the Feet, tossing and tumbling from one end of the Bed to the other, sleeping with the Mouth open (contrary to custom) are signs of Death.

IV. To sleep with the Belly downwards (contrary to custom) shews Madness : Rising upon a Critical day is dangerous : a violent Disease touching the Lungs (on a Crisis) may prove mortal : and if the Sick desires to go out of one Room into another, mistake the Room for a World.

V. Gnashing of Teeth in a Fever, with Deprivation of the Senses (if it be not a Frensey) or if an Ulcer or Issue dry up, become green, black, or swarthy, and the Patient wax still worse : or, if the Sick pull the Bed-cloaths, Rug, or Straws (if he could find them) or take vio-

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lent hold of any thing (and it be no Frenzy) Death will prove the Physician.

VI. The Distance between Breathing being too long, and the Breath being cold or gentle, are all Arguments that Death is at hand.

VII. Sweats on Indicative

and Critical days are good, the better if universal, and if the Sick be eased by it, it shews Health: but Sweats first of all cold; only in one part of the Body, chiefly the Forehead and Face (if the Sick dye not) the Disease will prove long.

CHAP. XXX.

Presages by Apostemes in Acute Diseases.

I. **PAIN**, Inflammation, Tumour, or Hardness upon or near the Ribs, on one or both sides, 'tis a bad sign; if there be great Pulsations and Pain, it shews Deprivation of Sense; and if withal the Eyes move faster than they should, there is danger of a Frenzy.

II. An Aposteme on the left Side, is more dangerous than on the right; and if it continue twenty days without Diminution, and the Fever cease not, it will come to Maturation: a Flux of Blood through the Nose upon the first Crisis, gives ease to the Patient, and is a good sign.

III. The Tumour soft and without Pain, is not very dangerous; and may continue two months before it be ripe: but if hard, great, and painful

it is (if not mortal) very dangerous.

IV. Some Apostemes purge only outwards, and they are little, round, and sharp pointed, and are most healthful: such as are large, gross or round and flat are more dangerous.

V. Apostemes that break within the Belly (making a Tumour outwardly) are dangerous: if they make no Tumour outwardly they are generally mortal: and if the Matter which flows out be white, and not of an ill savour, it is healthful.

VI. When the Yard and Testicles are shrunk, and apparently diminished against Nature, it shews Pain and Anguish, and that Death will suddenly follow.

VII. If the Pain of an Aposteme cease not by Spitting,

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or Laxative Medicines and letting of Blood, it is likely to come to Suppuration; and when it is broke, if Choler abound it is dangerous; and if the Matter come upon the first Crisis, 'tis to be feared Death will come upon the second Crisis.

VIII. It is most wholsom for Apostemes to break upon Critical days; and Coughing, Spitting, Spawling, Pain and Difficulty of Breathing, are signs that the Aposteme is near breaking.

IX. Sometimes an Aposteme breaks, and yet the Sick dyes, and sometimes they live; if, when the Aposteme is broken the Sick fall to his Victuals stoutly, and the Matter be white, equal, salt, and come without Pain, the Sick will live; but if the Feaver cease not, or if ceasing, there be a Relapse, prepare for Death, for it is at hand: if after the Feaver cease, the Thirst remains, it will return again.

X. If there be Pain and Heaviness on both sides; both sides are apostemated; but if there be more Pain on one side than on the other, let the Sick lye on the best side.

XI. Apostemes about or under the Ears: being ripe and broke, the Bitterness of Death

is past: the Aposteme is known by Swelling, pain, Heat, Burning, Redness and Inflammation about the place.

XII. In dangerous Diseases of the Lungs, small Pustules or Apostemes in the Feet much help the Sick: and in all Apostemes if the Pain ascends upwards it is dangerous.

XIII. If the Spittle also change from red to white, Health is coming; & contra, the apostemated Parts are in danger of shrinking; and then if the Apostemes vanish, Death ensues.

XIV. Aged people are more troubled with Diseases in the Lungs than young; and ease spitting, white Spittle, and not stinking, are commendable signs in all Diseases of the Lungs: but Spittle, black, red, or stinking is deadly.

XV. Hardness and Pain in the Bladder in a Quotidian, or if the Urine be stopped. Death hastens: but in Apostemes of the Bladder, if the Urine be like Matter, the Pains cease, Feaver mitigates, and the Bladder be mollified, the worst is past: those of the Bladder seldom happen but to Children between the seventh and fourteenth years of their Age.

CHAP. XXXI.

Prefages by Excrements in Acute Diseases.

I. **L** Audable Excrements be neither too thick nor too thin; but the thicker are worse; for Astringency in a Fever is naught: yet Looseness shews the Sick kept ill Diet before: and those Excrements of the Belly are best, which are according in Colour to the Food taken; and if the Sick go to Stool without pain, or violence it is good.

II. Yet know often going to Stool weakens the Body, spoils the Digestion, hurts the Retentive Faculty, and makes the Sick froward and faint.

III. Worms coming forth of the Body with the Excrements at the end of the Malady is a good sign, but at the Beginning desperate.

IV. Excrements of the Belly watery, white, or very red, or frothy, are very dangerous: but if they be black, green, or slimy, or mixed therewith, they are deadly signs: and it is very dangerous, when little Skins, like the peeling of Guts, come forth with the Excrements.

V. Wind going forth gently and voluntarily, is healthful: but going forth with Pain and Gripping, it is worse; but when

it is retained, and cannot get forth at all, it is dangerous.

VI. If the Urine have residence near the bottom, white, or pyramidical, it is healthful: but gross Resolutions, like Dust or Bran, in the bottom of Urine, is an evil sign; but is worse when it is like Scales of Fishes.

VII. Urine white and clear signifies Melancholy, is very bad, and shews a long Disease: but a white Cloud hanging in the Urine is healthful; a black is dangerous, and the more black the worse: Urine yellow, clear and subtil shews length of the Disease, and in such a case there is fear lest the Sick die before the Humour comes to Concoction.

VIII. Slimy, muddy, rawny, dirty, filthy, black, stinking Urine (if not Critical) is generally mortal by Cap. 46. Sect. 15. of this Book.

IX. A Childs Urine pale and clear, like Conduit Water, is very bad, and shews Melancholy, which is cold and dry, to wit, just opposite to a Childs temper, which is hot and moist.

X. A thing like a Cobweb swimming on the top of the Urine

rine, is an evil sign; and continually making a thick Urine argues a thin Body, and that the Sick is in a Consumption.

XI. But in all things relating to the Urine, have relation to the Bladder; for if that be diseased, all these Presages are in vain.

XII. If in a violent Feaver, the Urine appears like that of a healthy man, there is danger of Death; and the reason is because the Disease works upon the Spirits not upon the Body.

XIII. Vomiting of Flegm and Choler is a good sign: but if what is vomited up be green, livid, or black, (and there be no Crisis) 'tis dangerous; if mixed of these, it is mortal: if it stink much, and have but one of these Colours, Death comes galloping.

XIV. Spittle in all Diseases of the Lungs, and of the Ribs, or Spleen, if in the beginning of the Illness it be well digested, of a good Colour, and not viscous, it is good: but if it be with great Coughing and Pain, it is an evil sign.

XV. Spittle white, tough, knotty, green or fleshy, is very dangerous in a Feaver; but more dangerous is Spitting of Blood: black Spittle is worst of all, for it shews Death is nigh at hand: the same if the Matter remains within the Lungs, and stops the Wind-pipe.

XVI. But if Pain be eased by Spitting, it is very good, let the Spittle be what it will; and in this case black Spittle is less dangerous than otherwise.

CHAP. XXXII.

Presages by the Urine.

I. *Of Urine in General.*

I. **T**HE Urine comes from the whole Body and signifies generally; it is the *Serum* or *Vehiculum* of the Blood, separated from it by the Action of the Kidnies: mixt with the blood that it might wash it, being thick and full of Fibres, and so carries it through the smallest Veins, into the Extream parts.

II. *It is made of Drink or other*

Liquor with which the Food is moistned, without which the body would receive very little nourishment from its meat, for from its mixtion with the meat in the Stomach, by Concoction, there is made one even Substance called *Chyle*.

III. This *Chyle* is suckt up by the *Mesenterick* Veins which carry the profitable parts thereof to the Liver; then being converted into Blood, its parts are

separated, the Cholerick part to the Gall; the Melancholick part to the Spleen; the *Serous* part or Urine, (the proper excrement of the Liver, as the Ordure is of the Stomach and Guts) being superfluous and unprofitable, is drawn out of the Gibbous parts of the Liver, by the Emulgent Veins, and Action of the Kidnies; but not all, for some remains with the blood, through the whole Body, which, when it has performed its duty in carrying the blood, is partly exhausted in Sweat, and partly sent by the same way it went to the Reins and Bladder.

IV. Therefore Urine comes not only from the Liver, but from the greater and smaller Veins of the whole Body; which he that shall live two or three days without drink shall easily perceive.

V. And if it be not mixed with too much Drink or other things; it will in some measure declare the Constitution of the humors in the Liver and great Veins, and most parts of the Body; for being mixed with them, it contracted their qualities, and therefore is said to indicate their constitutions and gives signs of the Disease afflicting.

VI. It shews also the Diseases of the Parts through which it runs, as of the Reins, Ureters, Bladder and Yard; for that it takes along with it their filth, (if any be) Thus it shews the faults of the humors and parts of Mans body, by its Chymosis, or Parts, or Colour, or Scent, or

Contents, of all which we shall speak in order.

II. General Precautions.

VII. You ought to take the first Urine after Sleep, which is to be put into an Urinal white, transparent, and long, least the *Hypostasis* or Sediment should be broken, and big enough to hold it all.

VIII. You ought to keep it stoppt, free from external heat or cold, let it stand still till it is cold, and without disturbance or shaking to View it, and give Judgment thereof within six hours after it is made, least it Corrupt, and so hurt your judgment.

IX. If it grows thick or Muddy by cold, it ought to be gently warmed at a fire, but not stirred or shaken, least the Sediment be dissolved.

X. Those Urines which turn not thick with Cold, shews a great natural heat: the other shew cold.

XI. It ought to be Viewed in a place, not too light, nor too dark, nor in the Sun; the light ought also rather to come down into the Urinal, than upon the sides of it.

XII. The things to be considered in Urine, are the *Chymosis*, *perspicuity*, *purity*, *Quantity*, *Colour*, *Scent*, and *Contents*: all which shew the internal Diseases both according to and besides nature.

XIII. The Urine may be altered by things taken in, and by the Passages of the Reins and Bladder; therefore you ought to know

know the manifest Qualities which are impressed upon it from their various Causes, which are three in Number.

XIV. *First, Immoderate Drinking*, especially of Water or Thin Wine, makes Urine large in quantity, thin, crude, and such as shews not the Qualities and Diseases of the parts and humors, because it runs suddenly through.

XV. *Secondly, Saffron, Cassia, Rhubarb, Sena, Madder, Turmeric &c.* change the color; Garlick, Onions, Turpentine and other sweet Gums the scent: for the Qualities of these being preternatural, flow forth with the Excrements; chiefly the Urine, so that neither the Disease nor the Constitution can certainly be discerned.

XVI. *Thirdly, If there be an Ulcer or Aposteme in the Reins, Bladder, Ureters, or Yard,* the Urine will be thicker, troubled, and have White matter, blood, sand, or films; from all which things the discoveries of the Urine are useless.

XVII. For these Causes you must be careful that the Urine be changed by no Accident, lest your Judgment be deceived.

XVIII. To prevent which, we divide the Causes and Qualities of Urine into three differences; viz. 1. *Causes External.* 2. *Causes in the Passages.* 3. *Causes from the whole Body:* by the observation of which you may have a more true and certain knowledg of Urines.

III. *Of a sound Urine.*

XIX. This must be the rule of all the rest: a healthful Urine is of an indifferent substance, not so

thin as water, nor so thick as beasts urine, of a Gold or Amber colour, quantity answerable to the drink received, the sediment white, light, equal and piked at top. There must be no thick body in it, no bubble, film, &c.

XX. This shews a good Temperament, strong or firm Concoction, a sound body, and one youthful.

XXI. *A womans Urine* is more thick, not so pure and transparent as a mans, troubled and foul with things flying in it; because she has more superfluities in her womb and bladder, according to the plenty of which, the sediment of a Womans water is greater thicker and whiter.

XXII. *The Urine of Infants and Boyes* is whiter and thicker, and has more sediment than those of riper years, which comes from the plenty of humours.

XXIII. *The Urine of Old people* is white, thin, with little Sediment, shewing crudities, weak Concoction, and decay of Vital heat and spirits.

XXIV. These things being understood, you must consider, when other kinds of Urine are brought to you, how much they differ from the Natural; respect being had to the past life, for great Exercise, Watchings, Anger, Fasting, hot meats, hot Air, &c. inflame the Urine, and make them higher colored, with a mixture of Choler.

XXV. *On the contrary,* Idleness, much sleep, Gluttony, Drunkenness, cold meats, cold air, &c. cause a white and thick Urine with great crude contents; Thus may you

you distinguish between the Urine of a healthful & sick person.

IV. Of the smell of Urines.

XXVI. To smell to Urine misbecometh the Dignity of a Physician, but sometimes against our Will, we are forced to it. A sweet Scent it cannot have, unless the sick has took *Serpilium*, *Musk*, *Geranium Moschatum*, *Olibanum*, *Turpentine*, or some other sweet Medicine, the last of which gives it the smell of Violets.

XXVII. Sometimes the Stink also is taken from things eaten, as, Onions, Garlick, Rotten cheese: Sometimes from an Ulcer in the Reins, Bladder or Secrets, & then the Urine is white, thick, and has a purulent sediment: if it comes from a Stone in the Bladder, the stinking pus is thick like Snot at bottom, and made with pain.

XXVIII. If the stinking of the Urine be new, or the Urine red, thick and troubled, with or without a Feaver, it shews corruption and putrefaction in the substance of the humours.

XXIX. If the stink be old, the Urine red, thin, and transparent, (with or without a Feaver) the substance of some of the parts is putrified or corrupted.

XXX. If the stinking Urine be made upon a Crisis, that is, Critical, and much in Quantity, it shews present Recovery.

V. Of the Substance of urines.

XXXI. A Thin urine is either White, corn colored, Amber, golden, saffron colored, red, and those colours which tend to red-

ness: it is never blew, Azure, livid or black.

XXXII. Thick Urine is capable of all colours, as a thick white, thick black, thick red, &c.

XXXIII. Urine of mean substance, is from the equality of the natural heat, which duly concocting the nutriment, gives it a color according to the nature of the parts. Therefore,

XXXIV. Thin Urine, not from immoderate drinking nor other external causes, shews an Obstruction of the Reins and Ureters; which will not suffer any thick matter to pass: and this is sometimes in a fit of the stone: sometimes from weakness of Concoction, and abating of the Vital heat, by reason of which the water or drink comes forth of the same colour and substance as it is drunk, or rather thin white or transparent, which shews extreme Crudity.

XXXV. Hence it appears that Concoction is rather known by the substance of the Urine than its Color: and Hippocrates saith, That urine redish and thin signifies a disease of Crudity.

XXXVI. A mean Substance signifies a lively heat, and a good concoction in the Stomach, Liver and Veines, especially in these three colours, Amber, Gold and Saffron color.

XXXVII. A thick Urine comes (if not from the laxity of the Passages) from oppress'd heat and Crudity, the heat being burthened with Humours.

XXXVIII. To thick Urines add Fat and Oily (not that on which fat swims like a spiders web, but) that

that whose substance represents Oyl, or melted grease in thick-ness, being moved: this shews the body melts either with a Consumption, a Hectick Feaver, or a Dropsy.

XXXIX. *A clear, perspicuous, or transparent Urine* shews perfect Concoction, goodnels of humors, and plenty of natural heat, the force of which remaining in the Urine, makes a sediment by separation.

XL. *That which is changed by Cold, and by heat comes to it self* is of little signification, except it appearing first in acute diseases, signifies concoction: for in the beginning a thin Urine doth not easily turn, but growing it doth.

XLI. *A turbulent or troubled Urine* is that which you cannot see through, and for the most part comes from diseases of the Reins or Bladder: in such as have many humors, a simple Ulcer (from whence comes blood) or a foul Ulcer (from whence comes matter.)

XLII. *A troubled Urine without these Diseases* shews thick humors in the Veins, difficult to be concocted by the natural heat, from whence comes long and stubborn diseases and headaches, as Hippocrates saith, which if it continue long, threatens a Lethargy.

XLIII. *If the Urine is suddenly troubled*, Obstructions are opened, and the thick matter which has bin long lodged, comes from the Spleen, Liver, Reins and great veins.

XLIV. This commonly happens to healthful men after exer-

cise; and to sick after a Disease; especially after a Crisis of a long Feaver, as a Quartan; and in diseases of the Liver and Spleen; and upon the breaking of Apoplexies, by which means refreshment comes to the body.

XLV. *A reddish troubled Urine, or of a citrine or Amber color* without sediment, such as is made in the beginning of continual and intermitting Feavers, which is called simply, a crude Urine, comes from a crude superfluous humour flowing from the Reins, Spleen and Liver, into the Serum or whey of the Blood.

XLVI. *A confused Urine*, never follows the Diseases of the Reins and Bowels only, but alwayes the Diseases of the Veins, not shewing the abundance of crude humors, but the Confusion and corruption (commonly mixt with Malignity) of the blood, and humors in the great Veins: for Putrefaction mixeth, confuses and disturbs all things: therefore this kind of urine is only seen in continual, dangerous and malign Feavers.

XLVII. Sometimes, although the Urine be not mixt with any fault of the Reins Bladder or Vreters, yet it shews not the Constitution of the blood and humors: but being pissed forth yellow, thick and troubled, the blood may be exquisitely pure and red: this often happens in Quartans and intermitting Tertians, and in the Jaundice, when Choler gets out of the Liver, or Gall or other parts, into the Veins, and is not mixt with the blood; but, with the Serum or whey.

XLVIII.

XLVIII. Sometimes also the *Vrine* is according to Nature, both in color, substance and sediment, and yet the blood then let out is bad both in color and substance: this is commonly in the state, and before the Crisis of a continual Feaver, when the Urine is perfectly concocted, and nature hath not yet endeavored any evacuation of the noxious humour.

VI. Of the Quantity of *Vrine*.

XLIX. A proportional Quantity shews there is a moderate Serum, a sound body, and that nature does all things well.

L. Much *Vrine* comes from much drink, thin wine or water, Diuretick medicines, cold or other external Causes: and sometimes from fault of the Reins, when they continually draw the Serum from the whole body by a great force.

LI. This is chiefly in a Feaver that burns the Bowels, and melts the matter collected, which is drawn by the Reins: Hence is caused the disease *Diabetes*, from the sudden passage of the Urine which is much, white, thin, and without sediment.

LII. Sometimes it comes from an inward Disease, as when great plenty of water long contained in a place breaks out, sometimes from a Dropsy, sometimes from a waterish Crudity about the Guts, when it forceably goes to the Reins.

LIII. This Evacuation, although it a little weakens, yet it eases the Stomach and Belly of a Weight without extenuating any of the parts of the Body.

LIV. Sometimes the whole Body and humours melt into *Vrine*: this may come from a Feaver; but then the great quantity of Urine is not thin and white, but flaming or Raisin like, with fat like Oyl at the Top: this is the beginning of an Hectick Feaver.

LV. Little *Vrine*, neither from little Drink, nor from a dry diet, nor from sower and thick drink, much sweating, purging, Vomiting, nor great Labour, shews a disease in the passages of the Urine; or a weakness in the attractive faculty of the Reins.

LVI. This is also oftentimes caused from Obstruction or præternatural tumor in the Reins, and then there is a sense of weight and heaviness in those Parts: the like is manifest in the Contents of the Urine.

LVII. If there be an Obstruction from the stone, or other cause on both sides of the Ureters, there is a great and fixed pain.

LVIII. If the *Vrine* be little, with many settlings and flying things in it, or there be stoppage of urine or difficulty of pissing, with pain in the Privities, and *Perrineum*, there is either a Tumor, thick flegm, or a stone in the neck of the Bladder.

LIX. Healthful people often make but little Urine, when the drink goes into Nourishment: this is common in thin extenuated persons, and such as are lately recovered from a Disease.

LX. When the *Vrine* is little without these Reasons, it comes from a thick and slimy humour, which is hard to be separated,
nor

nor will pass through, Or, from Vehemency of a Feaver.

VII. *Of Colors in Urine.*

LXI. Labour, fasting, heat, or whatsoever heats the body, does colour the Urine, and that more especially when they are vehement.

XLII. That Urine which is longest held in, and made longest after meat, is higher colored than the former.

XLIII. Also if Choler gets into the Veins and is mixed with the Serum (as in the Jaundice) it makes the Urine of a yellow or Citrine Colour; the like judge of the Rest of the humors; so of *Atrabilis* in a black Jaundice.

LXIV. Urine of an Amber or Citrine color, in a youthful and temperate man, shews an healthful state of body: that colour which is beneath it, is a sign that the Vital heat is abated, and of the beginning of Crudities.

LXV. Urine sky-colored, blew, and lead colored (if they come not from stroaks) shew a predominancy or mixture of Melancholy, and extinction of natural heat.

LXVI. Black Urine, if it comes after Red and green Color, shews burning, and mixture of Melancholy, but if it follow a sky colour and livid, it shews an utter extinction of the natural and vital heat.

LXVII. Sometimes these Urines are made in a Crisis, both in sharp or acute, and also in long and melancholick Diseases; it is then without pain, and signifies the Recovery of the Patient.

LXVIII. A white and thin

transparent Urine like Water; if it comes not from much thin drink, shews great obstruction of the Reins, Mesentery, and Liver; or weakness of Concoction, from an extream cold Distemper of the Stomach and Liver: sometimes also it comes from a Feaver, when the Choler is carried up to the Brain, and this shews a Frensy.

LXIX. White and thick, if transparent as horn (called *Glauca* and *Charopa*) shews a great Quantity of cold coagulated humours, and thick snor like flegm: if it be *oapous* as milk: it shews abundance of thick and slimy flegm, and a coagulation of the humours through cold: if these Urines continue long, they foreshew long and cold Diseases.

LXX. The *Spicæa*, or corn-like colored, shews less Crudity, and more natural heat, near to that which is temperate.

LXXI. Citrine or amber colored, is the middle and healthful sort: above this is Gold colour, saffron colour, and red; all which shew that heat is increased above nature.

LXXII. Gold, Saffron, and red colored, if they be pure and transparent, they shew a pure and simple distemper: but if thick and troubled they shew the faults and mixture of the humors.

LXXIII. A Red Urine, if Transparent, is called burning or flame like, and shews the excessive heat of the Liver, and often a burning Feaver.

LXXIV. But if a Red Urine be thick and obscure, (with of

with

without a Feaver ; it shews a mixture of the Yellow or Red Choller : this appears commonly at the coming of Feaverish fits, but chiefly when the substance of the Liver is defiled by a Phlegmon, or Scirrhus as in a Droply ; or when it, or the Gall, as in the Jaundice are much obstructed ; by which means the Choler flows into the Veins and Urine, and so infects it, that if you steep a linnen cloth therein it will be stained ; and this will be so also after the taking of Rheubarb, Turmerick or Saffron.

LXXV. *Bloody Urine*, whether it be only like Water, wherein flesh hath been washed, or pure Blood it self, when it grows cold, has a bloody clod at bottom, this comes from wearing of the Reins, and opening their Veins by some stone, from whence Blood presently flows.

LXXVI. Some impute this to the weakness of the Liver, but they err ; for we cannot yet perceive how blood can come from any other part with the Urine, without a Distemper of the Reins.

LXXVII. If therefore there be bloody Urine, and the Loynes or Reins not hurt by a Fall or Bruise, it comes from a Stone wearing the Kidnies, especially when the Patient uses great exercise : but the imprudent use of Cantharides will also cause a bloody Urine.

LXXVIII. *Grape coloured Urine* shews that the Blood, or Choller is burnt or turned black, which we call Atrabilis : Green

shews great store of a Verdigrise like Choller, and Diseases thence proceeding.

VIII. Of things mixt with Urine.

LXXIX. *The Crown or top of the Urine being thin and white*, shews the Blood to be full of Water ; when thick and white that it is full of Flegm ; *when yellow or Citrine*, that it is natural ; *when of a Saffron Colour* that it is full of Choler ; *when red*, that the blood is inflamed ; *when Green*, that it is mixt with Green Choler ; *when Sky colored*, or *of a dark blew*, that it is mixt with Melancholy, or will presently turn into the aforesaid humors by Corruption : and the last of these shews either some Melancholy distemper or an Epilepsy.

LXXX. *Much froth at the top* without shaking of it, signifies much Wind in the Stomach and Bowels, and that the Cholick is attending, which may proceed from sharp and windy fruits, or defect of natural heat.

LXXXI. *If the Froth continues long with great Bubbles*, it demonstrates Obstructions from thick and slimy humors : if they easily break, they shew the thinness of the said humours.

LXXXII. *Little bubbles about the Crown of the Urine*, shew the Head-ach, called Cephalalgia, if they be all about the Crown ; the Megrim, if but half way about it.

LXXXIII. *If the froth is Yellow* the pain is greater ; if white and pale, it is less : which if the

Bubbles last long, it will be long.

LXXXIV. *The Bubbles being in the top of the Urine, shew that the pain grows less, and that it proceeds of an humour according to the color of that froth.*

LXXXV. *If the Bubbles be like little grains in the Crown which fall downward (the Urine being shaken,) and presently ascend again, there is a Catarrh or distillation of Rheum from the Head upon the Lungs, Stomach, Shoulders, and other parts.*

LXXXVI. *The nature of the humor distilling you may learn from the Color of the Urine, Froth and Crown.*

LXXXVII. *Fat swimming at top like Cobwebs, shews a Consumption according to the Judgment of the great Hippocrates.*

LXXXVIII. *And except it be from melting of the Reins it declares a Burning or Hectick Fever, or Consumption of the whole body.*

LXXXIX. *If the fat swims asunder like little Atoms of Oyl, it signifies both, but not so plainly: but you must beware in these Judgments, that the Sick has not lately before drank much Oyl.*

XC. *If those Oily Atoms or Cobwebs are easily dispersed, it shews the Vanishing of the Disease. & c. contra.*

XCI. *Red Sand comes from the Reins; where, if it be much and thick, it foreshews the Stone in the Reins.*

XCII. *This red Sand being con-*

glutinated together into bits about the bigness of miller seed, or a Barly Corn, and falling from the Substance of the Reins, makes the Urine thick, troubled, and red or blackish, foreshewing the Stone.

XCIII. *The Urine thin and white, shews stoppages of the Reins, and that a Stone may be fixed in the Head of an Ureter causing pain.*

XCIV. *Urine thick, troubled, and with Clods of blood at the bottom, shews a great stone held in the Reins, which cannot be removed, but in strong exercise wears the Reins causing the aforesaid Urine.*

XCV. *The like Urine may easily come from a fall, stroke, blow, contusion, &c.*

XCVI. *In an Ulcer after rest, the Urine is white and thick, but after hard labour it is high colored with a thick Sediment; then not long after follows, a thick, white, mattery, stinking Urine, almost like Milk.*

XCVII. *If the Ulcer is hollow and foul, the matter sinks to the bottom: where you see such like Urines as these, there is no certain knowledge to be given concerning any other Disease, but what belongs to the Reins.*

XCVIII. *If the Ulcer of the Reins is very foul, or it be a Fistula, the Sediment is thick, slimy, and like snot, or the white of an Egg, and the Urine thick, white, troubled, and stinking.*

XCIX. *The same things are to be observed in the Stone of the Bladder, as also in foul Ul-*

cers;

cers of the Bladder and Yard, Virulent Gonorrhœa's, &c.

C. But in the beginning of these Ulcers, there are (as it were) little threds in the Urine, at first thin, then thick, by which the whole Urine is made thick, and lastly of a snot like Sediment.

CI. Moreover in an Ulcerated Reins, there are also little bits of flesh in a troubled Urine.

CII. Hippocrates saith, That White hairs come from the Reins; but later Authors, as the learned Fernelius has observed, saith, that they come from the Parastatæ or Spermatick Vessels; where from Seed, they are made long and round, and hardened with heat.

CIII. These are many, and much to be observed in such as have had a Virulent Gonorrhœa; and Women that have had the Whites, or a foulness of the Womb.

CIV. Blood pure, red, and clotted, shews a recent or new Ulcer: but matter shews a sordid and inveterate Ulcer, either in the Reins, or in the Neck of the Bladder.

CV. The Difference of the two is known by this; that in an Ulcer of the Reins there is little or no pain, and the matter comes with the Urine: but in an Ulcer of the Neck of the Bladder, the pain is Vehement, and all the matter comes by it self without the Urine, at first beginning to piss.

CVI. Sand comes last after pissing; the red and the yellow from

the Reins, the white from the Bladder: but in a filthy Ulcer of the Reins, there falls white stones, from thence, coagulated as it were from hardened matter.

CVII. If slegm like snot sticks at the bottom of the Urinal, and it was pissed with pain, it declares either a Stone in the Bladder, or an Ulcer in the Neck of the Bladder.

CVIII. But as we have before said, that matter which is voided without pain comes from an Ulcer of the Reins.

CIX. Things flying in Urine like Bran, signify sores or hardened pustles in the Bladder; if they be in a thin Urine, they signify a fiery melting Feaver, which ferments the Blood in the Veins, and burning the Substance of several passages, makes a Scurf like Bran fall off which comes forth with the Urine.

CX. Scales in a stinking Urine, shews an Ulcer in the Bladder.

CXI. If they come forth without Ulceration, there is a Burning Feaver which melts the Coats of the Vessels into Scales, thereby causing a Consumption of the solid parts.

CXII. The Thinner the Scales are, the less dangerous they are, especially if thinner than Bran.

CXIII. Things which fly like thick bran, declares the same; but signify long Sickness.

CXIV. In a healthful Womans Urine, if it be troubled a little, and green or blew, with things like thin bran swimming in it, or like starch, which after set-

ling make a thick sediment like woolled wool, she is with Child.

IX. Of Contents and Sediment of Urine.

CXV. The Urine being made of Liquid matter and drink, concocted in the Stomach, and passing all parts, as Liver, Veins, &c. is mixed with the Food, Blood and humors, and receives a colour and substance from them, as broth from herbs and meat.

CXVI. The thicker part of the Urine, settles down to the bottom, and is called the *Sediment* or *Hypostasis*, which had its beginning and perfection every where with the Urine.

CXVII. Therefore the *Hypostasis* gives not Indications of the Stomach and solid parts only; but chiefly of the great Veins.

CXVIII. Urine which grows thick and is troubled by the mixture of some External or discrete thing coming from the Reins or Bladder, has a thick settling, which is not properly a *Sediment*, but the Dregs of Urine.

CXIX. Hence it appears then, that the *Chymosis* or thick part of the urine, gives matter to the *Sediment*, and the natural heat separates it, which if it be strong it suddenly gathers the invisible matter, dispersed in the Urine together, and sends it to the bottom; but if weak it makes a slower settling, and sends it not down, but lets it hang in the middle, which is call'd *Enæorema*, being divided and uneven.

CXX. A lesser heat in the Urine does yet more slowly separate, and cannot collect or gather the *Sediment*, but leaves it scattered or swimming at the top like a Cloud.

CXXI. Hence the position of matter in Urine is apparent; the *sediment* is in the Bottom; *Enæorema* in the middle, and the cloud at the top.

CXXII. But if the heat is extremely weak, or almost extinguished, as in a deadly putrid Feaver, the Jaundice, and Tertians, where Cholera flows in abundance from the Liver into the Veins, and is mixt with the Serum, it doth not separate at all, but the Urine is mixed and very confused.

CXXIII. In Feavers, when the *Sediment* first appears, it shews that the natural heat revives, and will get the Victory over the Disease.

CXXIV. Therefore when the Natural heat has overcome the pernicious humors and concocted them, the *Sediment* is good, viz. *White, Smooth, and equal*, which is best.

CXXV. An *Enæorema* in the Middle which is *white, smooth and equal*, is not so good as a *Hypostasis*, and shews that the native heat is somewhat weak, because that it cannot send the matter down being fully concocted.

CXXVI. A good colour, which is *white smooth, and equal*, is sign of Crudity, and of a Weak concoction and heat.

CXXVII. A black or blew *Sediment*

diment, is the worst of all, and foreshews Death.

CXXVIII. *A black or blew Enaorema, shews less danger ; and such a Cloud shews less danger than that : for in these the native heat is not quite spent, but has some strength.*

CXXIX. *Those Contents are best, which are indifferent in Quantity and substance, white, smooth, and equal, whatsoever errors from this is naught.*

CXXX. *When accustomed Sweating, purging or the like are wanting, the contents are many, thick, and crude.*

CXXXI. *Great eating, and strength of body makes many contents, want, fasting, watching, great exercise, anger and vexation, and such things as plainly consume the Substance of the Body, make few contents, or little sediment : this in Sound bodies.*

CXXXII. *In sick people that sediment which is thick, is either from abundance of crude matter, which the natural heat cannot overcome, and then there are signs of Crudity : Or from a Crisis, and then the Sickneſs evidently abates.*

CXXXIII. *A thin sediment shews Crudity in Diseases ; Or the beginning of Concoction : In healthful people, thin humors not having their due consistence.*

CXXXIV. *Smooth contents not divided, wrinkled, or torn, sticking together without any roughness, comes from a strong natural heat : the contrary from defect of heat.*

CXXXV. *An equal Sediment, whole parts are all alike in thickneſs and color, shew also the strength of the natural heat, and contrariwise.*

CXXXVI. *Corn colored, Golden or red colored, shews Choler to abound in the Veins ; Or the Blood to be corrupted through Vehement Burning.*

CXXXVII. *Hippocrates saith, that a Red smooth sediment in a Red Water shews health.*

CXXXVIII. *A sediment black, or black and blew, shews extinction of Vital heat, or Corrupt Blood : Or a black humour, as *Atrabilis* bred in it, or coming from other parts.*

CXXXIX. *Urine wanting Contents, is seldom Good, yet it is not always evil in Sound people.*

CXL. *The want of Contents is generally from want of matter in a thin Urine : the thinneſs of Urine is either from some great Obstruction ; Or much thin drink past away before concoction.*

CXLI. *Urine of sick people wanting Contents, is always evil ; and shews the defect of natural heat ; and that nature is hindred by great abundance of Corrupt humors.*

X. *The Practice in Judging of Urines.*

CXLII. *If any thing preternatural be seen in the Urine, (unless it comes from the Quantity of the matter taken in) it shews that the Veins, or Bowels, or Reins, or other passages of*

the Urine are diseased, and from whom the Urine contracts the same affect.

CXLIII. Those things which comes from the *Reins and passages of the Urine*, may easily be discerned by some of the former Rules.

CXLIV. If none of those things appear, you must referre all to the *Bowels, great Veins, and other parts of the body.*

CXLV. In discovering of these, always consider the *Season of the Year, the Weather, and the Diseases of the place or time, or both*; for those Diseases which are usual and mostly infect, are much to be suspected.

CXLVI. Then learn the *Sex*, which you may do by asking; as also the *Age*; and way and *manner of Living*; that the *nature and Constitution* being known, you may the better discover the Disease.

CXLVII. For the observation of all these things are of great use in finding out the nature and Quality of the affect, especially in its beginning, and when there are but few signs of it in the Urine.

DXLVIII. Thus, if it be an *old man*, in the Winter season, and in a moist Country, it is very probable that he has a Cough, distillation of Rheum, or heaviness and weakness of Stomach, more especially if the Sick were before time given to Gluttony and Drunkenness, from whence moist and Rheumatick Diseases commonly proceed.

CXLIX. If it be a young man,

of a Cholerick habit, in the middle of Summer, in hot weather, and a hot Country, after hot diet, and great labour, you may judge a burning Feaver, or a Cholerick intermitting Feaver, or a Dysentery, or Pleurisy, viz. such as the sick may be most subject to, or at that time may be most common among the People, or incident to the Country.

CL. A Urine which is neither changed by the *Reins*, nor force of external causes, shews a Distemper of the bowels, veins and whole body; and whether the Disease is simple, or from fulness of humours; and also what humour, and whether putrid, and with a Feaver or not.

CLI. The Discolour shews the Distemper; the substance thick or troubled, the fault of the humour; and confusion shews putrefaction.

CLII. But whosoever for vain glory sake, will seem to Conjure by a Piss-pot, let him repeat often what he first Knew by the Urine, for by the Circuit of words Fools are insnared: these are the words of the learned and famous Fernelius.

CLIII. If an Urine thin, and white or Corn-like is brought, say, That the Stomack and Liver are very cold, there is loathing of food, want of Appetite; and after eating, the Stomack is stretched, as with wind, with many and fowr Belchings: the sick is cold, and heavy headed and the whole body is faint: and that the sick kept formerly an il dyet, and was distemper'd either by taking cold food or drink, crude fruits

fruits, fasting or sadness.

CLIV. If the Disease has been Chronick, say, The Stomach is Crude or raw, the Complexion lost or pale, or that there is or has been a Flux, or swelled feet, and that the sick either has or is in danger of a Cachexy. *Leucoplagmatia* or Dropsy.

CLV. And because that such Urine is made in Melancholy, and tumors or obstructions of the Spleen, relate the symptoms of that, fear, troublesome dreams, sadness, noise, and pain on the left side, heart beating, *scotomia*, or darkness of sight, &c.

CLVI. If the Urine be white, thick and troubled, say, The sick is troubled with much thick flegm, the headach, or great sleepiness; the bowels are stop't with humours, the Guts and sides stretch'd with wind: and that there is either the Cholick or danger thereof; and the Stomach is afflicted either with loathing of food, or vomiting of Flegm.

CLXVII. If it be White and confused also, say, It is a Lingering Quotidian fever, and relate the Symptoms of it.

CLXVIII. If the Urine be Gold colored and thin, say, The Liver is hot with thirst, leanness, watchings, troubled sleep, with heat in the Palms of the hands and soles of the feet.

CLIX. If the same Urine be thick say, That Choler abounds with vomiting of it: that the mouth is bitter when fasting, the spirits faint, the stomach hot with thirst, the belly pained or loose, with danger of a Dysentery, or breakings forth of Mange, Itch or Scabs.

CLX. If the same be confused, say, There is a tertian or burning Fever, watching, Doting, Thirst, headach, or such like Symptoms of a Fever, present or at hand.

CLXI. If a Urine be red and thin, or indifferent, say, The blood is hot and distemper'd, a heavy or beating Headach, a laziness or loathsomeness to stir.

CLXII. If the Urine be red and confused, say, There is a continual putrid Fever, and then relate its Symptoms.

CLXIII. In the same manner from other Colors you may fore-shew the Jaundice, or, a Scirrhus, or Phlegmon of the Liver; Or, Melancholy, or Obstructions of the Spleen, &c. mentioning all the Symptoms belonging to that you pitch upon, and to those parts that are affected.

CLXIV. But first demand this Question, Whether the Disease came suddenly, or by degrees; when it began, or how long the sick has been ill? for by this you will know whether the Disease be acute or Chronick, and from thence order your judgment more securely.

CLXV. Then consider the kind of the Disease, viz. whether Acute or Chronick; the Sex, whether male or female; the Age, whether Infancy, Youth, Ripeness, or Old age; The Season, whether Spring, Summer, Autumn or Winter; The Country, whether Endemical, viz. such as are familiar to some Regions, as the Pox to the Indies; Struma's to the Spaniards; the Rickets and Scurvy to the English, &c. Or, Epidemical, which are commonly

malign and contagious Diseases, raging at a set time among the Popularity: Or, *Sporadical*, when various Diseases infect a Country, sometimes here and sometimes there. As also considering *the nature and constitution of the Body*, and Diseases then reigning, you may come very near to the Business you desire to know, viz. the Disease by name.

CLXVI. *Bubbles in the top of the Urine in the Crown*, shew pain of the Head, drowiness, dulneis, Lethargy, Palsy, or some Defluxion at hand: as also wind in the Breast, Stomach, Bowels, and Veins.

CLXVII. When you find the *Certain signs of a Distillation* or Catarrh, you may say, The Humour is fallen either upon the throat, shoulders, eies, nose, breast, lungs, sides, or joints; if upon the Lungs, that there is a Cough withal.

CLXVIII. If with the Catarrh there be signs of a Feaver, you may judge a Pleurisie is at hand, especially if it be Epidemical or Popular.

CLXIX. If with the Catarrh, the Urine be Oily, judge a Consumption either present or approaching.

CLXX. And having Discovered the part pained (for pain is a thing that every man takes first notice of) prudently relate the affects and Symptoms of the same.

CLXXI. If the Urine appear *perspicuous* and white the fourth day, in acute Diseases, 'tis deadly.

CLXXII. Urine *piss thick*, and

so remaining is the worst of all, and shews either death, or length of the Disease, if the party be strong.

CLXXIII. *Stoppage of the Urine* in the Iliaca, and Distemper of the Reins and Bladder is pernicious.

CLXXIV. Urine *pissed red*, and *so remaining* in feavers, is a very bad sign: but in the Scurvy it is oft redder than in a burning Feaver, and continues so long: to also in a Phthisis confirmed and a Hectick.

CLXXV. Urine *reddish and thick* in Consumptions, Feavers, Inflammation of the Liver and Reins, shews the length of the Disease; and in the state, sometimes death: if it continue red in weak persons, 'tis a true sign of Death.

CLXXVI. In a Woman with child, and in health, the *Sediment is like carded wool*, and there are little things in it about the bigness of hempseed, sometimes infinitely smaller, and sometimes much greater, and more white than ordinary sediment.

CLXXVII. If the sick seems freed from his disease, yet makes *discolored water*, with a sediment, as white as snow, they dye of a Relapse.

CLXXVIII. A little cloud appearing at top of the Urine in form of a Circle is bad: and in acute Diseases, it shews an approaching frenzy, and afterwards death.

CLXXIX. Urine *livid or leadish coloured* is oft seen in them which have an Anasarca: It proceeds from a defect of hear, and in acute Diseases shews Death is near.

CLXXX.

CLXXX. Lastly, *Vrine thin, and* | good, and foreshes that health is
of a good Color in acute Diseases is | a coming.

CHAP. XXXIII.

Prefages by the Pulses.

I. **T**HE *Pulse* is a Motion of the Heart and Arteries that cools the Natural heat by *Systole* or Contraction, and *Diastole* or Dilatation.

II. *Systole*, or Contraction, is that by which the *Arteries* close; wherein the Spirits expell the Vapours contracted by Aduſtion.

III. *Diastole* or Dilation, is that by which the *Arteries* open themselves, as 'twere, to take in Air and thin blood, to temper the natural heat, & nourish the spirits.

IV. Between these two motions, being contrary one to the other, there is a *twofold Rest*, the one at the end of the *Diastole*, the other at the end of the *Systole*.

V. As the *Vrine* shew the constitution of the *Liver* and *Veins*, by whose administration the whole body is governed; so the *Pulse* shews the Constitution of the *Heart* and *Arteries*; chiefly the strength of the whole body, and more plainly that of the heart.

VI. The Differences of *Pulses*, as former Physicians have delivered them are manifold; but as they are most of them undistinguishable, so are they unobservable and useless, and rather favor of

vain Curiosity, and idle subtilty, than of any true Principles of Art.

VII. The most prudent Physicians only observe three kinds of *Pulses*; which because of their reason, and perspicuous differences, we are willing to follow; and they are, 1. *The Equal and Vnequal*. 2. *The Swift and Slow*. 3. *The Strong and Weak*.

VIII. *The Equal Pulse* argues plenty of Vitality, freedom from Obstructions, and strength of Nature, all things being as they should.

IX. *The Vnequal Pulse* shew either obstructions and compressions of the Vessels, or abundance of humours.

X. *The Swift Pulse* shews the strength of the Faculty, or native heat as yet, or that it is not much weakened; but that the Faculties of the body, and the Animal and Vital Powers are laborious and intent to expel their Enemies.

XI. *The Slow Pulse* argues the contrary, and gives a great fear, that the Disease either has or will overcome nature, for it shews a kind of despair, or weakness and faintness of the Vital spirits.

XII.

XII. *The strong Pulse* shews the strength of all the Faculties, and the mightiness of the Animal and Vital Spirits: or, some extraordinary contest of Nature with the Disease.

XIII. *The Weak Pulse* shews weakness of the natural Faculties, decay of Strength, and dissipation of Spirits, and of the Vital Powers.

XIV. From the former Differences new considerations arise, for the Pulse may be first *equal and swift*: this shews Nature's conquest over the Disease.

XV. Or *Vnequal and Swift*: This shews a present Contest, and it may be dubious which will overcome, yet it shews Nature is able to contend.

XVI. Or, *Equal and slow*: It shews that Nature has contended with the Disease, and has with great labor and much ado overcome; but has thereby much weakened i self.

XVII. Or, *Vnequal and slow*: This shews a doubt in victory, and gives fears that Nature must suffer a conquest or be overcome.

XVIII. Or, *Equal and strong*: This shews that Nature has lately had a contest with the disease, and has overcome; for its equality shews the absence of the Enemy.

XIX. Or, *Vnequal and strong*: It presages good and even in the most acute Disease that nature will be *Victrix*.

XX. Or, *Equal and weak*: it shews faintness and weakness, and that a Crisis (for the most part good) has lately gone before.

XXI. Or, *Vnequal and Weak*: This shews Nature almost at her last gasp, and bids the sick provide for another world.

XXII. Or, *Swift and Strong*: This shews an absolute conquest by Nature, and shews that health comes upon wings.

XXIII. Or, *Swift and weak*: This shews Nature to be weak, and that she has tyred her self in contending with her Adversary; but ris a hopeful Pulse.

XXIV. Or, *Slow and strong*: It shews the strength of the Vital, but weakness of the natural spirits and powers: and that the Disease must give place to Nature.

XXV. Or, *Slow and weak*: This is very evil, and shews a suffocation of the natural heat and vital spirits: it bids the sick prepare for his Dissolution, for Death comes armed.

XXVI. *The Pulse Equal, swift and strong*, brings with it all the Indications of Strength, life, and health; and signifies a Restoration before the sick is aware.

XXVII. *The Pulse Equal, swift, and weak*, shews weakness, but it is a hopeful Pulse.

XXVIII. *The Pulse Vnequal, slow and weak*, brings with it all the Indications of weakness, want of natural heat, dissipation of the Animal and Vital powers, and certain Death.

XXVIII. *The Pulse Vnequal, slow and strong* shews a Contest in which Nature will certainly overcome.

XXX. *The total abolition of the Pulse*, shews death is at hand, more especially if in acute diseases.

XXXI.

XXXI. *The healthful Pulse is that which is neither unequal, nor swift, nor slow, nor strong, nor weak, but under all considerations in an equal Capacity.*

XXXII. *In men the Pulse beats stronger (as it ought to do) than in Women: and in Children swifter than in Elder people, because of the abundance of their heat.*

XXXIII. *The Pulse of a young man is the strongest; because the Faculties in him are strong; of an old man it is weakest, and of a boy, in a mean proportion: from hence you may judge what natural Pulse every sick body ought to have.*

XXXIV. *Moreover moderate Exercise strengthens the Pulses; Idleness makes them weak: Immoderate Exercise weak, but quick.*

XXXV. *The Unequal Pulse shews the Arteries to be burthened with many ill and noxious humours: the slow Pulse, the want of natural heat: and the weak Pulse, the dissipation of the Vi-*

tal and Animal spirits.

XXXVI. *This being understood, from any mixture of the three principal Kinds of Pulses, you may be able to deliver natural and true Prognosticks.*

XXXVII. *The Nature of the Pulse being understood, consider the nature of the Disease, whether it be Acute or Chronick; violent or gentle, putrid or not putrid; pestilential or benign.*

XXXVIII. *And in all Acute, Violent, putrid and pestilential Diseases account these prognosticks more speedy, swift, apparent and certain.*

XXXIX. *But in Diseases Chronick, gentle, not putrid or benign, deliver your Judgment with more caution, and that these Presages may be found more slowly, dubiously, and after a sufficient length of time.*

XL. *Lastly, A sudden alteration of the Pulse, (though the sick as to the other Symptoms seem to be better) generally foreshews that Death is at the Door.*

CHAP. XXXIV.

Presages by affections in acute Diseases.

I. **C**OLD, or cold Sweats on the Head or Face (by Cap. 29. Sect. 7. Of this Book) but the Belly and Sides hot and burning, indicate that Death is a coming: but it is healthful when the parts of the Body are equally hot, though they be something hotter than they should be.

II. *The Body heavy, and the Nails of a leaden, swarthy colour, shews Death will turn Physician; but enduring the Sickness without anguish, shews strength of Nature.*

III. *Consider the custome of the Body when it was in health, which if the Spittle, Sleep, or the*

Excrements be like healthful, Recovery comes apace : but the more these signs differ from what they were in health, the more is the danger.

IV. Sleeping in the night, and waking in the day, is a hopeful sign : and sleep in the morning is more commendable than at other times of the day : Continual watching is dangerous and shews a Frensie is near.

V. Sneezing in hot Diseases (though never so dangerous) is a very hopeful sign : but in illness of the Lungs, if it come with much Rhume, and Pain be felt after, it is dangerous, whether it be in extremity or otherwise.

VI. All manner of Dropsies in Feavers are dangerous, if not mortal ; for one is hot and dry, the other is cold and moist ; in this case there is danger of Putrification of the Liver, by reason of the extream Inflammation and Humidity : and then the Sick hath a dry Cough, spits but little, the Belly is hard, goes to Stool with Pain, Feet and Legs swell, there is Tumour and Inflammation in the Sides, sometimes dissipating, sometimes swelling, and sometimes a Flux follows, with great distemper of the Bowels and Guts.

VII. If good signs appear at the Decumbiture, the Sick recovers before the first Crisis, to wit, at the first intercritical : but if evil signs accompany the intercritical, Death is to be feared at the Crisis.

VIII. In Feavers happening to Women in Childbed, take the Decumbiture at the time of her

Delivery, and the Crisis from thence : and if the Feaver continue to the third Crisis, it prefaces Bleeding at Nose, and it is much if it comes not upon the day of the third Crisis, or near it : but if they bleed not at Nose, there is an Aposteme in some of the inferiour parts of the Body : but a Flux of Blood in those cases generally happen to people under 30, Apostemes to elder.

IX. Young persons oftner dye at the first Crisis in Feavers than ancient ; and the reason is, because their Nature is hotter : but old persons sooner die upon Relapses than young, because their Bodies are weaker.

X. Ulcerations in the Throat in hot Diseases are generally mortal.

XI. Feavers continue longer in ancient people than in young ; and ancient people are more subject to Quartans than young, because their Bodies are colder.

XII. All Quinsies are dangerous, if not mortal : the most dangerous signs in a Quinsie are, great Pain, difficulty of Breathing, and no Swelling appearing outwardly : but if the Tumour be outward, the external part of the Throat is most afflicted, and then there is the less danger.

XIII. If the Swellings appear not outwardly, they usually kill within four days at farthest without a Crisis, to wit, upon the first indicative : for Luna to the Semisextile of her place, in extream acute diseases often kills

kills, because she is then in a Sign opposite in respect of active Qualities, Nature and Sex.

XIV. If a red Tumour appear outwardly, and fall in a

gain, the danger of Death is great; and if the Tumour in a Quinsie increafe upon a Critical day, and neither break inwardly nor outwardly, Death or Relapse is to be looked for.

CHAP. XXXV.

The Prognosis of Tumours.

I. **A** Tumour is either curable, dangerous, painful, stubborn, or mortal.

II. Those are *curable*, which are in the musculous parts, in Bodies of good tempera-
ture.

III. Those are *dangerous*, which pierce the Inwards; or which are very large, and not pointed (saith Hippocrates) or in places very tender and sensible.

IV. Those are *painful*, which are in the Nerves and Membrains, proceeding of a sharp biting Humour.

V. Such are *stubborn* and long in healing which happen in tender and delicate Bodies, which refuse fit Remedies: as also in Melancholick, Hydroptick, Elephantick or Cachetick Bodies.

VI. Those are *mortal*, which are venomous, or in the noble parts; or cause a Flux, Effusion of Blood, Wasting of the Spirits, Swounding, or Convulsion.

VII. *Phlegmon*, or an Inflammation, if small, doth often re-

solve (which is known by the abating of Symptoms and Wasting;) but if great, and the Matter be thick, and deep in the Flesh, it doth often suppurate: if the Inflammation vanishes, and the Tumour suddenly strikes inward, with a Fever, or other evil Accidents, it is dangerous: if it neither resolves, returns back, nor comes to suppuration, it grows into a Scirrhus hardness.

If it falls in the fleshy parts it is said to end in fourteen days: on the Tendons and Ligaments in forty days. An Inflammation external often frees the Internal parts from many Diseases, and is healthful, except it be very great and malignant, then you may fear a Gangreen, or other danger. That is dangerous which seizes on the Eyes, Jaws, Penis, Uvula, Joints, or great Vessels. In a young person, and in summer time 'tis soon cured, and sooner in a lean than a fat Body.

VIII. *Bubo* (if not malign) being in the extreame parts, soon suppurates, and is not dangerous: if it ripens slowly, it may
turn

turn to a Fistula : those in the Arm-holes soon ripen ; in the Groin they are longer : behind the Ears with much more difficulty. *A malign Bubo*, is for the most part a sign of a sudden death, though all outward signs may appear well. *A Venereal* is only of difficult cure, more especially if the folly of the Physician has been to use bleeding and repelling Medicines, whereby nature has been diverted from her work and the malignity turned Inward, which should have come outward.

IX. *Carbunculus*, if black, it is often mortal; so also if it vanish, or happen in the Emunctories, or near to principal Members ; or about the Stomach or Jaws (where it generally choaketh :) but if it be little, appear first red, and afterwards yellowish, with Pustles, it is the less dangerous :

In a Plague time it is commonly mortal, especially if it be of a livid or black colour.

X. *Gangrena*, if it be not presently helped, the part straitways dieth, that is, degenerates into *Sphacelus*, as also the parts adjacent, and so suddenly causeth the death of the whole Body : but if the sick be young, the Constitution good, and the Nerves and Muscles be unhurt, it is less dangerous. It is more dangerous, if it proceeds from the bitings of Venomous Creatures. It is also dangerous if the humours continually flow to the part, or be in the Cavities of the body, viz. in the mouth, privy parts, bowels or fundament : that which happens from the Scurvy, is seldom cured ; in Hydropick persons it is always mortal.

XI. *Gutta Rosacea*, a red Face, is seldom cured, but much more hardly, if it be full of Pustles, and as though it was ulcerated ; if it be from the Birth, it is unremovable : and with great difficulty cured, if it proceed from the French Disease, or a Scorbute.

XII. *Erysipelas*, Antonies fire, (if simple) commonly resolves : if composed, it ulcerates, and is then more commendable : if it happens in the face, head or matrix, it is very dangerous, if not mortal. If, by repellers, you force the matter from the externals to the internals, 'tis also dangerous, yet more dangerous, when it seizes on the more noble parts and jaws, as also when a wound, fracture, dislocation or putrefaction are joyned with it.

XIII. *Herpes*, the Shingles, are seldom dangerous : but if they encompass the body round, they are mortal. A *Herpes exedens* does not often admit of Cure in our dayes ; by some it is called the Wolf ; from its perpetual eating the flesh. The *Herpes miliaris* proceeding of Cholera mixt with flegm is of difficult cure, but of little danger, unless it be hurt by the unnatural use of Repellants. But that which proceeds of Cholera mixt with the Serum of Blood (which we conclude to be the *Phlyctænæ*) are neither dangerous nor difficult to be cured, because they are generally Critical, & follow upon the ending of a disease, as a surfeit, cold, ague, fever, &c.

XIV. *Pruritus*, Itch, oftentimes turns into Scabs : in old people it is rarely cured : in gross Bodies it is evil : if it comes of Melancholy, it endures a long time : in Consumptive persons, if the Body

dy be bound, it is deadly, saith Hippocrates. If through continuance it gets into the whole habit, it is never cured, but generally proves mortal: I knew three Brothers all young men, dye purely of the Itch, which by length of time becoming habitual, at last corrupted the whole body, which with putrid and eating ulcers destroyed them.

XV. *Sudmina*, the Measles, is seldom or never dangerous, nor continuing many dayes. Yet some account them more dangerous than the small Pox, and they give this reason for it, viz. because the offending matter in the former is totally expelled; in the latter, it retires back again: but, by the leave of the learned, I take this to be a mistake, for by reason of the Feaver which excited them, if there be but the least sweat the malign and offending matter transpires through the Pores of the skin.

XVI. *Lichen*, *Impetigo*, a Ring-worm, it is not dangerous, and (if new) easily cur'd: but if it hapen in a melancholick Constitution, it is more hard, and turns into a Leprosy. In one I saw it ulcerate, and afterwards became cancerous, wherein was much danger, for the Patient lost his life.

XVII. *Oedema*, it seldom comes to maturation (except in hot places) because the matter is cold, and therefore often ends in resolution: sometimes it turneth to *Scirrhus*, *Nodosity*, or the like, for the much using of Digestives, makes the Matter wax hard. If it degenerates into *Scirrhus*, it is hard to cure. It is dangerous, if a Consumption or a Dropsy accompany it: It is also

the worse if it happen in old People, melancholy bodies, in winter time, and in such where there is much debility of natural heat.

XVIII. *Struma*, the Kings evil, if it be superficial, movable; and with few kernels, there may be resolution: but if many, fixed, hard, and malign not. If the Tumor be great, and near the *Trachea Arteria*, or encompassed with Veins, it will be difficult to be opened, by reason of the Nerves recurrent, and a Flux of Blood; which if they should be pricked, or cut, the sick would either become dumb, or very hoarse (like as in a Cold:) and sometime life it self is lost: If they grow painful, or degenerate into a Cancer, or can joyn to any great Nerve or Vein, or are Hereditary, the Cure is very much to be despaired of.

XIX. *Ganglion*, seu *Nodus*, a Wen, if it be great and of long continuance, it will never come to Resolution; if it be about a Joynt, there is scarcely any Cure, for in that case cutting is dangerous. It is not in it self malign, yet may easily be made so by ill applications, by which means often times it degenerates into Cancer; but this is chiefly to be understood of such as are contained in no proper Cistis.

XX. *Schirrus*, if it comes once to have hair upon it, to grow great and to have no pain or feeling, it is incurable: in all other cases it is very difficult: if it grows livid or suppurates, it degenerates into Cancer: but in the beginning (whilst it is little) there may be hopes of Resolution,

On, and cure, though very rare : but the use of too violent repercussives at first, makes the Tumour past all hopes of Cure.

XXI. Cancer, if it happen in the Stomach, Head, Neck or under the Arms, it is generally incurable, because those parts are dangerous to be cut, for the great Flux of Blood which may ensue. It is seldom cured by Medicines, often by Chirurgery, yet not without danger ; (harsh things exulcerate it. If it falls in any great Cavity, as the Womb, Mouth, Tongue, Pallet, Anus, 'tis absolutely incurable. In the Breast it is very dangerous, yet many have been cured by Cutting, but if it be Superficial, and not very big, (by Incision) it may be done the more easily.

If it happen in the Face or Nose, it is called *noli me tangere* : if it be ulcerated, or it be in the Legs or Thighs, it is called *Lupus*, a Wolf : but in other parts Cancer.

XXII. Scabies, Scabbiness, if dry, it is more difficult to cure, than if moist : sometimes it is Critical. *Porrigo*, *Achor*, or *Favus*, a Scald-head, as it proceeds from Salt Flegm, so is it a stubborn Disease, not easily cured but easily returning again : if they prove inveterate, or continue long, they degenerate into the *Alopecia* or *Leprosy*. *Vari* oftentimes degenerates into *Ulcers*, and so becomes difficult to Cure : *Sirones*, vanish after the Worms which are in them are pickt out. *Phlyctenæ* or *Ephelides* are Blisters or red Pustles, which being broken have Pus or matter in them, thick like Honey, and Yellowish, or white like Milk, which presently becoming

a Scab, are forthwith Healed.

XXIII. *Lepra*, scarcely admits of cure, by any ordinary means : if old, and in old people it is incurable. The *Elephantiasis* is much more difficult to Cure than the General Leprosy.

XXIV. *Thymon*, a Wart, it often vanishes alone : if cut off, and the root be remaining, it grows again. If the Roots be small and slender they are easily removed : but if broad, with much more difficulty.

XXV. *Clavus*, a Corne, never goes away without cutting or pulling up by the roots, There is no danger in the Cutting though it bleed, provided you expose it not to the cold air. I knew two, which by cutting their Corns were killed, for not taking care of them they Gangegreen'd, by which they lost, not only their feet but their lives too.

XXVI. *Phlyctenæ oculorum*, blisters of the eyes, which the Arabians call *Bothor* : Those which grow in the *Adnata* are less dangerous than they in the *Cornea* : the more superficial the less danger, the more inward the more danger ; for it is to be feared that they should erode the whole thickness of the *Cornea*, whereby the watery humor will be let forth, or the *Uvea* start out : if there be an *Exulceration* and it be not stayed, it will corrupt the whole Eye : but if the Ulcer seizeth only the *Caruncle*, and that the *Punctum Lachrymale* grows Callous, it becomes *Fistula Lachrymalis*.

XXVII. *Anchylops* is difficultly Cured, if the *Apesteme* opens, it becomes an Ulcer, which quickly

quickly turns hollow, and then is called *Fistula Lachrymalis*, which continuing a year, causes foulness of the bone. *Agylops* is difficult of Cure, in regard Medicines are ill to be applied to it, by reason the Sight is so nigh : more difficult when the *Aposteme* breaks out at the Nose, whereby the matter flows out at the Nostrils : but most difficult when it degenerates into a *Cancer*, which is accompanied with pricking pain, extension of the Veins, hardness and bledness of the Skin.

XXVIII. *Parotis*, is longer before it comes to ripeness than other *Buboes* : the *Critical* is Healthful : The *Pestilential* dangerous, and for most part a sign of sudden Death : The *Venerial* is not mortal, yet difficult to be cured, being made worse by Blood letting and Purgings.

XXIX. *Polypus* is difficultly cured ; more difficultly if it turns into *Cancer* : *Sarcoma* much more easily. That *Polypus* which is soft, white, or red, or white and red is the best to be meddled withal. That which is hard, livid or blew, scarcely is curable, and is like a *Cancer* : moreover that which grows low, or in the middle of the Nostrils is more curable than that which grows high, because Medicines are more applicable to it.

XXX. *Paronychia*, proceeding from an External cause, as a bruise, or such like, where the matter is neer the skin, is easily cured ; but if from a malignant cause, which sometimes corrupts the whole finger, yea the whole

hand, 'tis difficult to cure, very dangerous, causing sometimes from the extreame pain, the Death of the Patient.

XXXI. *Cheeratoides*, Glandulous tumors whether *Broncocele*, *Atheroma*, *Sceatoma*, or *Meliceris*, are seldom cured without Manual Operation : if their Coats or *Cista* be broken, or not all removed, there will remain almost an incurable Ulcer or *Fistula*. Ganglion if small may be discussed.

XXXII. *Aneurisma* in the head, leggs, or arms, if small may be cured, though not without difficulty : if it be great, it is incurable, except with taking off of the Member. If through a mistake incision be made, Death suddenly follows : it is commonly a long Disease ; but some Authors say, It has kill'd the Patient in about 2 years time.

XXXIII. *Varix*, if it proceeds from the Spleen, or is *Critical*, is not to be cured : If it comes upon a Melancholy madness, the Disease ceaseth, as *Hippocrates* saith, In it self it is not dangerous, but rather frees from Diseases, the whole body being purged from gross blood thereby : if it be great, the removal may cause Death : if it be inveterate it is not good to meddle with it, lest being cured, there happens a reflux of Melancholy Blood to the noble parts, whence may follow Madness or Suffocation, or a Cancer, or malign Ulcer : if an Ulcer falls upon the *Varix*, its not to be cured till the *Varix* is removed.

F. XXXIV. Em-

XXXIV. *Emphysema*, or a Flatulent Tumor comes not often in the Fleshly parts; but if it possesses the Great Joynts, or be large in weak and *Cacochymick* bodies, the Cure is difficult and tedious; otherwise easy.

XXXV. *Tumor Aquosus* is not dangerous if the principal parts which feeds it be not too much debilitated; yet it is difficult to be cured, chiefly if it be in the joynts. *Hydrocephalus* is always hard to be cured; if it be without the Skull there is the less

danger in it: but if it be in the *Ventricles* of the *Brain*, or between the *Brain* and *Menings* it is very dangerous, but not so doubtful when between the *Dura* and *Pia mater*.

XXXVI. *Apostema seu Abscessus* is generally *Critical*, or upon the end of a Disease: if it encrease and the Sick grows better, health is a coming: but if it strike inward, or it yet increase, and the Sick grow worse, let him prepare for Death, for 'tis neer at hand.

CHAP. XXXVI.

Prognosticks of Wounds.

I. IF you would know whether *Health* or *Death* might be expected, consider the *parts wounded*; whether they be easie to heal, difficult or mortal: together with the *Action*, *Substance*, *Situation*, and *Figure* of the *Wound*; having respect also to the *Temperature*, *Age*, *Sex*, *Region*, *Season*, and *Constitution* of the *Time*.

II. *Wounds* in the *Nerves*, *Tendons*, *Joynts*, and *Bones*, without appearance of *Tumour*, or evil signs, shews the *Humours* recourse to the noble parts, thereby pre-saging *Death*.

III. *Hippocrates* saith, That a *Wound* in a *Joynt*, with *Flux* of the *Belly*, is for the most part mortal.

IV. *Wounds* with *Fracture* be-

hind in the *Head*, preface a *Convulsion*: but before, danger of raving or *Frensie*.

V. *Convulsion* in a *Wound*, after great *Inflammation*, shews the *Nerves* to be hurt, and is for the most part mortal.

VI. If *Symptoms* appear, or a great drought, after ten days time, in *Wounds* of the *Head*, it presages an abscess to be in the *Liver*.

VII. *Wounds* with great loss of *Blood*, and *Convulsion*, are dangerous; as also all *pricks* or *punctures* in the *Nerves* or *Tendons*, accompanied with *Vomitings* and long *Inflammation*.

VIII. *Wounds* with great *Con-tusion* are dangerous, and so much the more, if the *Veins* or *Arteries* be hurt.

IX. A Nerve half cut is more dangerous and painful, than if it were through cut: *Wounds in the Joynts* also, are for the most part mortal, because of the *Apo-neurisms* of the *Tendons* and *Membranes*, with which they are covered and knit.

X. A mans Biting when he is fasting in the morning, *Aegineta* saith, is venomous.

XI. The Biting of a mad Dog is venomous, and for the most part mortal (without sudden Cure :) for though the Sick feel not much in the beginning, yet after a month or more, it seisth the Brain and Heart : The bitings of serpents is present Death, without speedy Remedy.

XII. Wounds in the Brain, or its Membranes, and in the Loyns, cause Senselesness, Convulsion, Raving : in the Breast, fleshy part of the Diaphragma, Veins and Arteries, there may be hopes of Recovery : in the Brain, Heart, Diaphragma, Veins and Arteries in the Breast, Stomach, recurrent Nerves, Liver, Spleen, Intestines, Reins, Bladder and Marrow of the Back Bone, nothing but Death can be expected.

XIII. Wounds of the Tendons are less dangerous than those of the Nerves; Convulsion is an evil sign: Nerves and Tendons being Wounded do easily putrify.

XIV. A Poisoned Wound, though little, may bring Death, especially if near to the Heart or any other Noble Part.

XV. Wounds of the Brain for the most part cause Death.

XVI. The biting of a Mad Dog if the Venom is not suddenly taken away by *Alexipharmicks* or

Antidotes) is certain Death after a little time : for the Poyson and malignity disseminates it self over the Universal man, to the Contamination of the *Vital Spirits* and utter destruction of the Life or Living Principle:

XVII. Gunshot Wounds if they be long before they suppurate, the pain and pulsation cease, and the part becomes yellow or livid and stupid, a Gangreen or Sphacelus is present.

XVIII. Wounds of the Arteries are hard to Cure, from the hardness of their Tunicles, and constant Pulsation : if the Great Veins and Arteries be hurt, the Wounds is mortal.

XIX. The Great Tendon of the Heel being Wounded or Contused, may bring Convulsions or Death : therefore be careful in its cure.

XX. Wounds of the Joynts, if with Luxation are dangerous, if not mortal: however the Cure is difficult, and lameness will follow.

XXI. If the Inside of the Joynt be Wounded, the Vessels there being great, there succeeds a violent Hemorrhage.

XXII. Wounds in the Heads of children and Diseased persons are difficult of cure : if the Tumor suddenly vanishes, a Fever happens upon the eleventh or fourteenth day, especially if the Wound be little, and the Inflammation great : if Inflammation ceases the fifth day, and the Wound becomes livid and black, 'tis dangerous ; and if reason fail, and the tongue look black and be dry, it is mortal: Feavers, Vomittings and Convulsions also are evil Symptoms

XXIII. *Wounds of the Temporal Muscles* are dreadful and very dangerous, being accompanied with Vomiting, Convulsion and deep slumbring, and because of their continual motion are hard to be cured.

XXIV. *Wounds of the Menings of the Brain* are mortal: 1. if a Nerve be hurt, 2. when blood or humors obstruct the Original of the Nerves, 3. when after a few days there is a Feaver and Frenzy withal.

XXV. *Wounds of the Nose* may be conjoyned, if the part be not quite off, for then 'tis impossible.

XXVI. *Wounds in the Windpipe* are extremely dangerous; if between the rings 'tis curable.

XXVII. *A Wound in the Lungs* great and deep, the great Vessels being hurt, or the branches of the Aspera, Arteria, and much Wind coming through the Wound, with a great effusion of Blood is mortal.

CHAP. XXXVII.

The Prognosis of Ulcers.

I. **ULCERS** which remain *uncured a year or more*, either rot the Bone, or alter it.

II. *Ulcers* that are *evil coloured* and *black* are malign.

III. If an *Ulcer*, (being fill'd up, and ready to *siccatrize*) begin to run again without manifest cause, it is in danger to become *Fistulous*.

IV. *Hippocrates* saith, That *Ulcers* having no Hair about them, are hard to heal and *siccatrize*; as also such as come from some Disease, as the *Dropsie* and *Cachexia*.

V. He also saith, That they who have *Ulcers* accompanied with a *Tumour*, do neither fall into *Convulsion*, *Raving* nor *Frensie*: but if the *Tumour* go away without mani-

fest cause, and the *Ulcers* be in the *Back*, there followeth a *Convulsion*; but if in the fore part of the *Body*, a *Raving* or *Frensie*, if in the *Breast*, an *Empiema* or *Pleurisie*.

VI. *Ulcers* accompanied with *Varices* or *Intemperature*, or whose *Sides*, or *Lipes* are callous, are hard to heal.

VII. *Ulcers* in the extremities of the *Muscles* of the *Armes* or *Legs*; or such as penetrate the *Body*, are very dangerous and difficult to heal.

VIII. *Ulcers* in the extremities of the *Body*, as *Feet* or *Hands*, often times create *Pblegmon's* or other *præternatural Tumours*, which in a *Crisis* are difficult to cure.

IX. *Hip*

IX. *Hippocrates* also saith, If one sick, having an *Ulcer*, dye; the *Vicer* will be (before he dies) dry, black, blew, or pale.

X. *Fistula's*, with many *Caverns* are hard to heal: if near to any noble part (as in the *Breast*) or in the *Bladder*, *Womb*, or *Bowels*, are dangerous and mortal: in the *Ribs*, *Back*, *Joints*, or in *Ano*; they are dangerous and difficult: In *Cachectick* Bodies they are long in curing.

XI. By how much the *Deeper* an *Ulcer* is, by so much it is the longer in Curing.

XII. *Old* or *In veterate* *Ulcers* are not cured without danger, except the Body be first well purged, and a good Diet observed, lest some evil or incurable Disease ensue.

XIII. If an *Ulcer* be long in Curing, or being cicatrized, breaks out again, the *Bone* is foul underneath it.

XIV. If the *matter* be of a middle consistency, white, light equal and not stinking, it gives hopes of an easy Cure: but if it be thin, fluid, pale, livid or stinking, it is very evil.

XV. *Ulcers* in *acoc hymick* bodies, and in parts subject to much humidity, are difficultly cured.

XVI. *Ulcers* neer to the *Nerves*, or *Tendons* are dangerous.

XVII. All *Ulcers* which have a dry distemperature joyned with them, are very difficult to be cured.

XVIII. No *Ulcer* can be cured whilst the bone remains foul: if

the *Caries* be near the *nervous* parts, or in the joints, or about the *Tendons*, *Arteries* or *Veins*: 'tis not easily cured, but, for the most part, the *Nerves* and *Tendons* are corrupted.

XIX. All *Fistula's* are difficult to cure, and some are absolutely incurable. That which is but newly begun, not deep, in a young and sound body, the Edges not very hard, but somewhat soft with matter, is more easily cured.

XX. But an *Old Fistula*, having many *Caverns*, in a Consumptive, or *Cacochymick* body, or which touches the *Tendons*, *Nerves*, *Veins*, *Arteries*, *Bones*; or is in the *Joints*, *Vertebra's*, *Cavity* of the *Breast*, is very difficult to cure, yea, for the most part uncureable.

XXI. *Burning* from *Lightning*, is generally mortal: from other things, if it hurts the *great Vessels*, a *Gangreen* often follows: *burns* of the *Eyes* and *groins* are very dangerous: *burns* great and deep alwayes leave scars behind them: if an *hairy part* be burnt, the hair will never grow again: *burnings* of the *Intestines* is incurable.

XXII. *Ulcers* of the *Eyes* for the most part leave blindness, especially where the *Horny Tunicle* is thoroughly corroded, whereby the *watery* (and sometimes the *Crystalline*) humor is let out.

XXIII. *Ulcers* of the *Nose* are hard of Cure, for which, respect must be had to the whole Body.

XXIV. *Ulcers* of the *Bladder* are very troublesome, and for the most part incurable.

CHAP. XXXVIII.

The Prognosis of Fractures and Dislocations.

FRactures in hard and dry Bones, Cholerick and old people, are hard to heal; in very old, impossible.

II. Fractures in the Ribs, with Inflammation, and spitting Blood are most dangerous.

III. But simple Fractures in the Ribs; in the middle of the Arms, Legs and Fingers, and made transverse, and in soft and humid Flesh, or young people, are not dangerous but easie to cure.

IV. All Fractures near the joynts, and in the heads of the Bones, and such as press inwards: as also Fractures in the Skull, or in the Thigh, and where there is Marrow, or many broken pieces, or accompanied with Wounds; are not only difficult to Cure, but also very dangerous.

V. Fractures in the Head are healed in thirty five or forty days; in the Thighs, Legs, Shoulders or Arms, in fifty or sixty days; in the Jaws, Nose, Hands

or Feet, in twenty or twenty five days; in other places, according to the quality of the Bone, Age, Air, Season, Temperature, Diet, Medicine, and ordering of the Sick, which things, rightly done, shorten the time of the Cure.

VI. *Dislocations in the Wrist, Fingers or Knee*, as also in lean members, having moist Nerves and Ligaments, are easie to reduce.

VII. *Dislocations of the Shoulder or Elbow*, in tender, fat, and gross People, with Fracture or Apostematation, are hard to Cure.

VIII. *Those which have been long out*, are almost impossible to be reduced.

IX. *The two uppermost Vertebrae of the Neck being imperfectly dislocated*, hindreth breathing and bringeth Death within two or three days time.

This is eminently aprarent in all such as are hanged, where the dislocation is absolute.

CHAP

CHAP. XXXIX.

Of Diseases of the upper Ventricle, or Head.

I. *Cephalagia* proceeding from what cause soever is seldom dangerous, but easily curable, and so much the more as the cause is light from whence it proceeds.

If good Signs, as Pus, filth, snout, or water flow forth by the Nostrils Ears or Eyes, there will be good hopes of a speedy and sudden Cure: But if there be present an Acute Fever, with a white Urine, Cholera is carried upwards, and an Inflammation is to be feared; Or, if the Sick Vomit what is green or like to brass; Or Watches much, and is deprived of his rest; Or it be accompanied with a Deafness; Or, the Sick falls into a sudden Madness, Frensy, or Raving: or is taken with a Dotage, or suddenly surprised with a Catalepsy, with a stoppage of the Bowels, or being extraordinarily bound; Or, be taken with a Convulsion in the whole Body, or in part as in the Neck: together with a Noise and Ringing in the Ears (although without a Fever) Or if there be a Vertigo, hoarseness of Voice, stupidity of Sense, or numbness of the Hands or other extremities: Or, if the Sick falls into an Epileptical or Apopleptical fit: in all these Cases the Disease is very doubtful and dangerous. Now if it be very Vehement,

and suddenly vanishes away without a Crisis: Or if the extremities wax cold, shewing the Native heat to be almost extinguished: Or, happening with an acute Fever, on the fourth day from which, there is no good Signs: Or, the Sick suddenly becomes senseless, or speechless, snorts, snores, and can scarcely fetch his Breath: Or, if lastly, a Pleurisy seize the Sick, especially with Violence: The Disease is for the most part not only incurable but Death is near at hand.

II. *Cephalæa*, is generally curable, but with difficulty, and is often in danger of returning, having intermission of Fits, as in the Falling-sickness, so that for a time they do seem perfectly whole: this Disease doth vex Women more than Men, by reason of their long Hair.

In some Women it comes at set times, viz. at the time of their Courses which are stopt, and in such it is more easily cured; but if it has been Long, or of many years standing, it hardly admits of any remedy.

III. *Hemicrania*, the Megrim is sometimes with intermission, sometimes with continuance; being not so dangerous as violent, and generally curable in short time.

In some it is Critical and terminates a Disease. If it be Symptomatical, and of short Continuance, it is easily cured: but if of long continuance it is scarcely to be helped; if remedy be found, it often returns upon slight causes, or taking the least cold: If it be violent with a great Obstruction of the Brain, it is in danger to degenerate into a Vertigo, or an Apoplexy; but the latter, if a cold and moist distemper of the Brain preceded.

IV. *Vertigo* (and *Scotoma*, which is when all things seem to turn round) will be quickly changed into pernicious Diseases, as the *Falling-sickness*, and *Apoplexy*; and if the things which the Sick sees appear *Bloody* and *reddish*, he is in danger of *Madness*, if *purple colour*, the *Falling-sickness*: The *Scotoma*, or dark *Vertigo* is worst in *Winter* or beginning of the *Spring*, and shews that the *Falling-sickness* will follow.

If it happen to old people, the cure is very doubtful or scarcely to be hoped for, because of the weakness of the Brain: if it continues long, it certainly foreshews an Epilepsy or Apoplexy, more especially the Scotoma. If it comes from a partial Obstruction by gross and thick vapours, it is soon dissolved; but if from serous and flegmatick humours (in which there is a present sense of fluctuation) it will be of long continuance: That which proceeds from a Windy Vapour bred in the Brain is very frequent, surprises upon small occasions, and yet lasts long.

V. *Phrenitis*, the *Phrensy*, is

said to be (by *Galen* and other learned men) most sharp and perilous, and for the most part incurable and deadly. *Hippocrates, lib. 4. Aphor. 72.* saith, That *Urine white and clear* in those that do rave, is a very evil and deadly token.

If there be a quavering of the Tongue, trembling of the Hand, gnashing of Teeth, Convulsion, great chillness or cold in the beginning of the Disease, as also when the Sick picks Wooll or Straws about their Bed, or a drop or two of black Blood flows from the Nostrils: they are all certain signs of Death, because it is a noble part which is affected; but dotage with laughter, decrease of Symptoms, Sweating, Hemorrhage or Loosness, are hopeful signs of recovery.

VI. *Mania*, *Madness* if it proceed of thick, black, and gross *Choler*, it is hard to cure.

It is a violent and strong Disease, continuing not only months but years even to Death. If the affect be Hereditary it is incurable; if it comes with sadness and fury, it is difficult. But if it be accompanied with Laughter, light Symptoms, natural Evacuations, as Sweat, Stools, Hemorrhage, at Nose, Hemorrhoids, Varices, Terms, it shews easy Cure. Hippocrates, Sect 6. Aph. 21. saith, if *Varices* or *Hæmorrhoids* come to *Madmen*, the *Disease* is cured. *If it be recent it is cured by diet alone. A bloody Flux, Dropsy, Tertian Ague or Quartan happening in a Mania, takes away the Disease: and sends the humours from the Head*

Head to the lower parts, thereby making a new Distemper.

VII. Lethargy, the Lethargy, if it be of long continuance, and in fat, gross and old people, it is incurable.

By how much deeper the sleep is, or the Sick is harder to awake, so much the more dangerous it is: It is very dangerous if it comes upon an acute Disease. If it be an Exquisite Lethargy, and the strength daily decays and wasts, continuance of a cold Sweat upon the Head, or it end in a Sphacelus of the Brain, it is wholly incurable. If it chanches to one that is young, and in the heat of Summer, if the Urine is thin and clear, and the Excrements of the Belly be many and Liquid, and withal a trembling, or a Phrensy forth with following it, the Cure will be very doubtfull. But if it over passes the seventh day, without any sensible hurt to the Sick; if the Animal Functions be not much impaired; if the Sick is better after the expulsion of the matter upon the Nerves; Or if the matter being corrupted, has an Evacuation by the Ears or Nostrils, or by an Aposteme behind the Ears, there is great and eminent hopes of Cure.

VIII. Carus, dead Sleep, Coma a deep Sleep, if they follow taking Opiats, or things of like nature, are generally incurable, and the Sick dies.

The Cure is of much difficulty, if the respiration be impeded, or the sick has an heaviness of the head: (because the humor penetrating the substance of the Nerves, and extending them, causes immediately a Convulsion.) Or, if the Disease hap-

pens after some great Evacuation: If it happens in the declining of a continual Feaver (in which the Vigor and powers of the Body are mightily weakened) the Disease is absolutely incurable.

IX. Apoplexia is impossible to be cured, (saith Hippocrates lib. 2 Aphor. 24) if it be a strong one; and not easy to cure: if a weak one, it causing speedy Death. If it seise a young man in Summer time, it is most dangerous; and, if at any time it be cured, it, for the most, leaveth the Palsie, either in the whole Body, or in part behind it.

If upon a difficulty of Breathing a sweat ensue, Or, if upon a Paroxysm the sick forthwith becomes dumb: or, snores not aloud; or, is not surpris'd by any acute Feaver (whose heat might attenuate and dissolve the Pituitous matter.) or, if it happens to Ancient People, the sick is incurable. Hippocrates saith, That this Disease kills in seven daies, unless a Feaver seises, which must be a violent one, from an Inflammation of the humours and spirits, and in the beginning of the Disease: otherwise, if it be gentle, it will not discuss the matter causing an Apoplexy: Hippocrates in Coacis saith, That a Feaver in the declining of the Disease, or after it has continued long, is mortal, for then nature is very weak and in a manner dissolved.

X. Catalepsis, if soon cured, oft times degenerate into a Lethargy, or Apoplexy.

The disease is of a stubborn nature, and not easily curable, the Paroxysm being over, the sick is sleepy and dull, as if a Lethargy had overtaken

taken him: it is not easily cured, because of the stubbornness of the humour of which it comes, leaving the Sick weak and indisposed for many months after it. If there be a plethora withall, the Disease will be in danger of often returning; because it is to be feared that the whole mass of Blood being infected with this congealing Vapour or Spirit, may by its circulating with the Blood leave the Seminalitie in all parts of the Body, which if the paroxysm returns twice or thrice, is confirmed.

XI. Epilepsia, the Falling-sickness, most commonly happens to Children, but if it falls to any one after twenty five years of Age, Galen saith, it is incurable.

The cure is very difficult if all the Functions be abolished, if the Convulsion be stronger and more Vehement than ordinary, of a longer continuance, and withal the Excrements flow forth of their own accord; if it afflicts either children before ripeness, Or old and decrepid persons, Or, Women with Child. But if the Disease be in the beginning, has short paroxysms, the sick breaths freely, and the Convulsion be not very Violent, there is hopes. If it be Hereditary, grievously afflict Infants, Or upon the use of Sneezing Medicines the Sick cannot Sneez, the Cure is desperate, if not without hope; so also if the Disease be inveterate.

XII. Convulsio, a Convulsion, if it be of long continuance, and universal, it is incurable, if taken in time, it may be cured with much ease.

If it be caused from Hellebor; Or arise after a Phrensy; Or proceed from a wound, especially in the Brain, the Disease may be feared to be incurable. If those parts near the Brain be affected and do suffer; if it hapen primarily by consent of some Nerve, with vehement Symptoms: if it arises from a great afflux of Blood: if it follows upon the monthly Courses in Women; if it attends and follows upon Feavers; Or, if it be accompanied with Violent and acute pains about the Bowels or Guts; the Cure will be very difficult, although not altogether without hopes. If the Disease only seizes those parts which are more remote from the Brain, chiefly the less Noble; Or, if it be only by consent of the Brain (it lying under no pertinacious or stubborn Disease) the cure will be the more easy. They that are affected with a Tetanos commonly dye within four days; if they outlive that time, they escape and recover: A Phusodes or Cramp endures so long, as until the Muscle be relaxed.

XIII. Paralysis, the Palsie it is for the most part incurable, if it happeneth, especially to old people, and in Winter time: if it be caused by a Sinew cut, it is incurable, and if the Paralytick member do grow less and less, or change colour, it is hard to cure, or rather incurable.

If it comes from a forcible relaxation of the Verrebræ; Or, from an Incision or cutting of some one of the great Nerves; Or, the Spinal Marrow, wherein there is no hope of Coalition or joyning together again of the Incision, the

disease is said to be incurable. If it happens to aged people (in whom there is an imbecility of heat,) Or if the member be extenuated and the Vegetative heat changed and altered, especially if the Eye on that side be impaired (which argues an extinguishing of heat;) Or if there be many of the Nerves and Muscles affected: Or, if it succeed some vehement Cause, as following upon an Apoplexy, the Cure will be found exceeding hard and difficult to be effected. But if the Resolution shall be in the Thighs or Feet; Or, the Member resolved and Loosened be actually and naturally hot; Or, if a Trembling, or a Feaver follow upon it, the Cure will be more facile and easy.

XIV. Tremor, Trembling oftentimes goes before a Palsie.

The Cure will be the more easy, if it proceeds from causes which are evident. It will be doubtful and difficult, if it happens on the left side, in regard that the innate and natural heat of that part is the more easily made to decay; Or, if it turns into a Convulsion, for then the Morbifick matter, takes to it self a more evil quality; Or, if it happens in a Burning Feaver, with a doting following it: Or, if the Sick shrink and start, when they are toucht, for then the Nerves are over moistned by the Morbifick humor. The Disease is incurable if it happens to persons in years, or in old age (because of the imbecility of the Spirits;) Or, if it falls in a Vehement Phrensy or Melancholy, for then it is caused by the over great exsiccation or drying of

the Nerves, either by a Feaver, or some depraved quality; Or, if it be Hereditary; Or, if it proceed from some fault of Diet, in such who have the Organs of the Animal faculty extreamly weakened; Or, if the Sick shrink and start when toucht in an acute Feaver, upon which follows a Convulsion.

XV. Melancholia, is long and tedious; if it happen to ancient people it is incurable.

The Cure is easy if the Disease be Recent, or but in beginning; Or, if the Imagination be no more than hurt, being accompanied with some kind of Laughter; for Galen reports that he has often cured a Melancholy in the beginning with only Baths of Sweet waters. Or, if the Hemorrhoids come down Critically; Or, there be a Critical breaking out of Scabs, Itch, or other Diseases of the Skin. But if the affect be Hereditary; Or, Chronical and of long continuance, it is Incurable: for the Melancholy humor being seated and fixed in the Blood, humors and Spirits, contemns the force even of the strongest Medicines, whence this Disease is said to be the disgrace of the Physician.

XVI. Incubus, if it continue, will degenerate into Apoplexia, Epilepsia, or Mania.

If it proceeds from an Internal Cause, and seizes upon those that are well in years; Or, if it be of long continuance and frequent, and such as after the fit the Sick remains stupid and Blackish; Or, if it happens to the party being half a sleep, half awake, it then coming nearer to an Epilepsy: Or, if after the

awaking a cold Sweat, Trembling of the Heart, Spasm, Convulsion or a Syncope follow thereupon, the Cure is desperate, and not much to be hoped for.

XVII. *Amaurosis*, or total Blindness, proceeding from Obstruction of the Optick Nerves is, for the most part, incurable: but if the Obstruction be imperfect, causing only a diminution of Sight, but not Blindness; Or if the Sight be not totally extinct: there is some hopes of Cure: if it comes by Humours gathered into the fore part of the Head, compressing the Nerves, it is curable.

Hildanus (*speaking of an Amaurosis Cent, 5. Observ. 19.*) saith, That a certain man after a strong Vomit lost his Sight, and that he cured him with giving him the same Medicine again: for then the humours being much stirred by that Violence and cast upon the Optick Nerves compressing them, did hinder the passage of the Spirits to the Eyes, which same humours being carried away by the same Medicine, the Sick was cured. But I knew a young Girl of about sixteen years of Age, who, by taking one single Dose of Cephalick Pills, became Blind, and once or twice more taking the same Medicine totally took away her Sight, which she has lost to this hour, being about eight years since: And I myself can speak it upon my own experience in my own person, that upon taking one single Dose of Cephalick Pills, I became so dim sighted, that I could not see to read the largest Print; which having

before me but lately the preceeding example of that Girl, I was Cautious of taking a second Dose, nor have I from that time to this taken a Cathartick Medicament, but am by other means perfectly recovered, so as that I can now discern the smallest thing imaginable to be seen.

XVIII. *Ophthalmia*, or Blood shot, may be taken away with great ease; it is seldom or never incurable.

The Cure is not difficult if the Disease comes by consent from the External parts; Or, if tears be more plentiful and more smarting, because it comes sooner to an end; Or, if the Belly be very loose, for by that means the Disease is often cured: But if it arise in a cold Country and in a cold time; Or, if it happens to little Children (in whom it signifies the weakness of the Head;) Or, if the pain be continual and long, for then it shews either a Corrosive humor, or matter strongly distending, or suppurating; Or, if it be by consent of the Membranes of the Brain, and parts contained within the Skin; Or, if there appears in the Eye small grains of filth, signifying a slowness of Maturation: the Cure in all these Cases, though it is not to be dispaired of, yet it will be performed with much difficulty.

XIX. *Albugo*, *Leucoma*, a White Spot or Pearl: if it comes after a Wound or Ulcer, and is a Scar is not easily cured.

And the reason is because, that in a part which hath such exquisite sense, sharp remedies and such as are fit to wear away a scicatrice

or Scar cannot be endured. But if the Disease comes of Flegm, or a thick humor remaining after an Ophthalmey, the Cure will not be difficult, especially if it be not old, and of long standing.

XX. *Cataracta*, a Suffusion, if it be newly begun, and the Patient be young, and can see as through a Mist, if the season be futable, it may be cured; but if it be confirmed and the Matter be very gross, it will not yield to Medicines, but must be couched. The green coloured Cataract like Water standing in moist places, and that Cataract wherein the Pupil of the Eye is dilated, so far that no Circle may be seen within the Tunics of the Eyes, and the Eye seemeth all black or all white, are both incurable.

If the Sick discerns not the Light, Or, the Cataract be Black; or Green, it is absolutely incurable, nor can it be helpt by the Needle: If it happens to an Infant, or to very old or Aged people: Or it be caused by a violent Fever, Small Pox, or some extraordinary and vehement pain of the Head, the Cure will even then be found very difficult: But that which resembles clear and pure Air, or Silver, or Plaster, or Pearls, leaves some greater hopes of a Cure.

XXI. *Surditas*, Deafness from the Birth, or if it be absolute or of long continuance, or if the Tympanum be broken, or a Scar be upon it, it is incurable: but if it proceed from a Fever, the Cure of the Fever is the Remedy; and if it increase or decrease, or come from a

Distemper of the Brain, it is curable.

If it proceeds from fault of the Auditory Nerve, which is amiss either by its frame and fermentation, or by its thickness, by Obstruction; it is scarcely ever cured.

XXII. *Odontalgia*, the Tooth-ach proceeding from rotten or hollow Teeth, is seldom or never cured without extraction of them.

The hopes of Cure is great, if there be a kind of Pus or purulent matter gathered together in the Ear; Or, if the Tumor arising in Gums or in the Cheeks, not first appearing the matter be transmitted from the interior to the exterior parts. But if with the pain, there be a Burning Fever and an unnatural grating of the Teeth, (from a Convulsion of the Temporal Muscles) it shews a hurting of the Brain, and therefore threatens first a delirium or dotage: and suddenly after even Death it self; insomuch that the hope of cure is certainly but small.

XXIII. *Hemorrhagia*, Bleeding at Nose is dangerous (if not critical) except it be soon stopped.

If there is a Burning Fever with pains of the Head and Neck; and of the whole Body: Or, if there be present a Weakness with a kind of Trembling: Or, in those whose Monthly courses fail them: Or, in such as are deaf, or have a distortion of the back bone, with difficulty of Breathing, or strong pain in the Inferiour parts: in all these Cases the Cure is no way to be attempted. If the flux is immoderate and immeasurable, and in
Cho-

Cholerick Bodies the Choler is inflamed, making the face of a Citron or Orange Color; Or, in *flegmatick Bodies*, of a Leaden Color: Or in *Melancholy Bodies*, of a dusky or blackish color; Or, if it flows forth to the quantity of two quarts: Or, if it affects those that are of an high and red Colour, with a pain of the Head: Or, if it terminates not the Disease, it seems Critical to, but a chilness and stiffness follows thereupon (shewing that the Spirits and natural heat are exhausted;) the Cure will then be difficult to be performed. If in affects of the Liver, the flux be at the left Nostril; Or, in affects of the Spleen at the Right; Or, if it be accompanied with Sweating of the Brest or Head: Or if it happen to such as are Feaverish, who in their recovery has their Belly abounding with Water, or are in danger of a Dropsy: Or, if it be attended with weak, faint and cold Sweats, and a kind of Chilness with all; Or, if in an acute Disease, it has joyned with it a quick and sudden Motion of the Eyes, a turbulent and troublesome sleep, and frequent Watchings; Or, if in acute and Burning Feavers, there is sent forth (on the fourth day) drop by drop, thick, gross and black Blood, with other ill Symptoms; Or, if such a Bleeding chance to be in chronick or inveterate Diseases, the Cure will be indeed very doubtful.

XXIV. Catarrhus, A Distillation of Rheum from the Head in old people, or a much extenuated Body is incurable.

If the Catarrh be more frequent than ordinary, and withall more grievous; Or, if it falls down with impetuosity and Violence: Or

if it be joyned with a pain of the Head, the Cure will be found very difficult.

XXV. Angina vera, a true Quinsy is dangerous if not mortal: by Sect. 12, 13, 14. Cap. 34.

A Cynanche is very difficultly cured, if it be joyned with a great and intense Feaver, the Spittle being dry, clammy and thick, (the disease coming from an Inflammation:) but if the matter be transmitted to the Lungs, where an Empyema is bred, from whence malign Vapors are sent up to the Head, causing a delirium or doting; Or, if to the Pleura Membrane, there causing a pain of the whole Brest, with a Cough and difficulty of Breathing; Or, if to the Heart, causing a kind of Trembling, and almost indiscernable beating of the Pulses; the Event then of the Cure will be very doubtful. If the Feaver prevail to the greatest height and intenseness; Or, if the Face of the Sick becomes greenish; Or, if the Corners of the Eyes, become Blackish and thick; Or, froth appearing about the mouth, shewing the Heart to be much streightned and obstructed; these are all signs that the hope of Cure is past. If the Feaver be very acute the sick is choaked in four days at the Uttermost, but most commonly in about Eighteen hours time. In a Paracynanche, if it seems to Vanish away, when no Crisis is to be expected, and a little swelling without pain appears, which cannot be suppurated either by Nature or Art, it threatens Death: In a Synanche, though the Symptoms are not much the more mild, than in the other sorts, yet there is greater

Greater hopes of safety, in regard that the Inflammation is transmitted to the exterior parts, with a possibility of being drawn forth and digested. Hippocrates seems to comprehend all those differences in one sentence, where speaking of an Epidemical Angina, he saith, In the sum of all, To them that could only not swallow, the Disease was Mild and easie to be endured; but it was desperate to them who had withal a difficulty of Breathing.

XXVI. *Distemper of the Brain.* If it be without matter it is not dangerous: if it be with matter the Cure is more difficult: if the matter be not evacuated, it either remains and corrupts the part, Or is transmitted to other parts, creating some new Disease, according to the nature of the part receiving, and humor causing. If it comes of Blood, the cure must forthwith attempted Lest that an Inflammation or some other Disease should come therefrom. If it comes of Flegm, the cure will be somewhat difficult, more especially if the Disease doth happen in Winter time, for then it will easily degenerate into an Apoplexy or Palsy. If it comes of Melancholy, the cure will be much more difficult, yet it is said to be easily done in the beginning.

XXVII. *Commotion of the Brain.* In youth it may be cured, or by natural strength it may be out grown: But in Age it is without hope: If it comes through any Blow or Fall, and it Apostematizes outwardly it is a hopeful sign; but if raving, delirium or a Fever ensues it is dangerous.

XXVIII. *Inflammation of the Brain.* It is desperate or rather without hope, if a Convulsion follow upon it; if the Urine be white and very clear, because the Choler is strongly drawn up into the Head: Or, if a delirium be at the beginning of the Disease, and there following upon it gnashing and grating together of the Teeth, by reason of the Temporal Muscles, and Muscles of the Jaws; Or, if it tend to suppuration, because the suppurated matter cannot possibly be evacuated within, or betwixt the Skull and Membrane. The hope of Cure is but small, if many of the Functions be hurt or depraved; Or if there be a Trembling of the Tongue; Or, if a kind of cold stiffness invade the Sick, after he has voided downwards white Excrements; Or, if there falls from the Nostrils a black drop or two: Or, if they pick or scrape together straws, &c. But these are good signs of recovery; much Blood flowing from the Nostrils on a Critical day; much and hot sweat from the Head; and if after the height of the Disease, there be a large evacuation of yellow Choler by the Belly.

XXIX. *Contusion of the Head.* If it be without a Wound and near any principal Vessel: Or, if it be too much exposed to the Air, there is great danger; in the former because of the too great loss of Spirits: in the latter for fear of a Gangreen, by reason of the dissipation of the natural heat. If it be without a Wound the danger is not so great for
the

the Aposteme being opened, it will have the common fate of other Ulcers.

XXX. Hydrocephalus, Dropfy of the Head. The cure of it is very doubtful, as well because the Disease is in a Noble part, as also because an Apoplexy or Lethargy does easily seize the sick upon it : *The first kind more easily yeelds unto Medicin; The second kind is much more difficult: The third kind is almost if not altogether incurable.*

XXXI. Unnatural Watchings. If they be with a Feaver they are the more dangerous ; and if long and continued, they foreshew Frensy, Raving, Delirium, or Madness. *The Cure is difficult, if they happen unto those that are young and not accustomed thereto ; Or, if they bring with them a Convulsion or a Cough, for the latter will indanger an Ulcer of the Lungs, or an Universal pining, or an Heëtick : Or, if they have their Original from Internal Causes.*

XXXII. Cataphora, Sleeping Coma. The Cure is doubtful if it follows upon a great impairing of strength, through some acute Disease : *Or, from some pernicious affect of the Brain ; Or, if it happen in a continual Feaver : Or, if it has its Original from some Malignant Cause. It is scarcely curable, if it arises from a hot and dry Disease ; Or, if it grow to be so Vehement, that both Sense and Motion, and the very Breathing it self is taken away.*

XXXIII. Oblivion, or Forgetfulness. If it be caused by

Poyson, Narcoticks, or Philtra. Love Potions, it is dangerous ; from Watchings more dangerous, because the Animal Spirits are dissipated, wasted and spent : *If from an Ill conformity of the Head and Brain, or an Aposteme, or in very young Years, or old Age, It is incurable : for in Youth it breeds folly, and in old Age dotage.*

XXXIV. Delirium, Dotage. If it happens in very Young years (not being Symptomatical) it makes the Child a Fool : If it be Symptomatical, it is either without a Feaver, or with a Feaver : that without a Feaver, commonly called *Temulentia*, Drunkenness, which is a Distemper of the Animal Spirits from taking too much Beer, Ale, Wine, Cider, Perry, Mead, Spirits of Wine, Strong Waters; Hemp Seed, Darnel, Henbane Seeds, Mandrake Bark, Opium, Poppy Seeds or Juyce, *Levanthe Sticks* and such like, it is commonly without danger, for after Vomiting and rest, nature alone rouses up her Forces, and restores Health to the Sick. *If it be with a Feaver, especially a very acute Feaver, it is dangerous, and often foreshews (if it appears in the beginning, and without Signs of Concoction) either a Phrensy or Death: But if it be with Concoction, and other hopeful Signs, it is Critical, and foreshews Health.*

XXXV. Rabies, Raging Madness. This Disease befalls some persons sooner; as within twenty, thirty, forty, or sixty days at the uttermost : but in others more slowly as at a year, two three;

three, six, seven, and in some at ten and twelve years after; and this comes to pass, either from the disposition of the part bitten, as being more or less Noble: Or, more or less remote from the Heart the Fountain of the Vital Spirits: Or, else from the Constitution of the Patient, and season of the Year: Or, Lastly, from the Quantity, and strength or weakness of the Poyson. There may be good hopes of Cure if the wound or hurt reaches not to any Vein, Artery or Nerve; or, if it be not very deep: Or, if the Poyson be immediately washt off, and drawn forth by attractives before it penetrate into the Body. But if the Venom was not immediately washt off, Or, if sighing and sobbing happen thereupon: Or, if fear of water be present, the hopes of Cure will be little or none.

XXXVI. The Waking Coma.

The Cure of it is very doubtful, if the Sick have their Speech hindred: Or, if while they Breathe, a murmuring Noise be heard in the Throat: Or, if the Sick cannot Swallow his Drink without great Trouble: Or, if a thin humor distils out of the Nostrils. And it is very difficult for as much as the affect does easily degenerate into a Lethargy or Phrensy.

XXXVII. Rigor, Extreame coldness and stiffness. It often degenerates into a Palsy or Trembling, especially if it happens to old people, or such as are of a cold constitution, by reason it threatens a Congelation upon the Nerves. If it

ceases not upon an Evacuation, it is exceeding evil and dangerous: and so likewise, if it be attended with an Atrophia or Consumption and wasting of the whole Body. That with a continual Feaver shews the Inflammation of some Bowel, if the Feaver happned in the beginning: but if in the end, it shews that either the Feaverish matter is moved out of the Veins: Or, that the Inflammation tends to suppuration: If it be Periodical, it is least dangerous, especially if it happens on a Critical day, or an Evacuation of Excrements happen thereon.

XXXVIII. Glaucoma, Pin and Web. If it comes after an Inflammation, or a Flux of Rheum into the Eyes, and is recent, it is easily cured: but if it follows a Wound or an Ulcer, or sharp Medicines, the Cure will be very difficult, more especially if inveterate.

XXXIX. Hypophagma, Sugillation, The Purple spot: being a redish black and blew Blemish: if it be taken in hand betimes, or in its beginning, the cure will be easy: if inveterate much more difficult: if the Veins of the Cornea be much tumified, and repulsive do no good nor any help be found by universal Revulsives, the cure is in despair.

XL. Mydrasis, Platucoria, dilation of the Pupilla: if it be Native, or from the Birth: Or, accidental from External Causes accompanied with the Rupture of the Uvea: Or, if it be inveterate, It is said to be incurable. If it proceeds of dryness: Or, if of humidity after an extreame

and violent pain of the Head : the Cure will be difficult. *But if it be from External Causes without Inflammation : Or, from humidity, not after a violent pain of the Head, Or, be Recent, and in a youthful person, the cure will be the more easy.*

XLI. Aposteme in the Ears. The Cure is doubtful by reason of the greatness and intensiveness of the Symptoms, especially in such as are young and not able to beare pain : if they live beyond the seventh day, they commonly escape. *In Infants and little Children, it is so much the more dangerous, by reason of the Quickness of their Sense, and the sharpness of the pain.*

XLII. Ulcer of the Ears. If it be recent, and after the flowing forth of the rotten filth and corruptions the pain of the Head, and hurt of the Senses cease, the Cure will be hopeful. If it be inveterate, or degenerates into a *Fistula*, (which is known by the oldness and long continuance of the Ulcer, virulency of the filth, and the Callosity or insensible hardness and thickness of flesh) the Disease is exceeding difficult, if not desperate. *So also if it proceeds from an Aposteme of the Brain broken, wherein there first of all Issueth forth great store of the said filth; and then afterwards it comes forth little and little at a time by degrees, till at length it be all consumed and wasted: before all which there went signs of an Inflammation of the Brain: which see Lib. I. Cap. 52. Sect. 28.*

XLIII. Pain of the Ears. The Cure is very doubtful, if

it afflicts Children and Infants ; if it troubles those that are declining in Years, and be accompanied with many Relapses, or keep its seat in the interior or deeper part of the Ear, the Cure will be very difficult : *In other cases there is the less danger, but that is to be judged from the cause.*

XLIV. Tinnitus, Noise in the Ears. If it proceeds from the Air or Wind, it is easily cured : but if from frequent Blows upon the Head and Temples, it is cured with much difficulty, because that (the humors by reason of the pain, flowing together to the Organs of hearing,) it is wont to turn into a Deafness.

If the Cause be Internal from hot Vapors, the Disease is wont to be of long continuance ; if from a flegmatick humor, as it began by little and little, and from the less to the greater, so it will goe away and return again at certain seasons and intervals : if from a Cholerick humor in Feavers, it is either Symptomatical or Critical ; sometimes it vanishes of its own accord, and sometimes not till after a Cholerick flux of the Belly.

XLV. Ozena, An Ulcer of the Nostrils. If it be Recent, and proceeds from an humor free from malignity, it is easily cured. But if it be sordid, putrid and inveterate with much difficulty. *If it proceeds from the French Pox or Elephantiasis, it cannot be cured till those Diseases are cured. If it degenerates into a Cancer it is past all hopes.*

XLVI. Ptyalism, Unnatural Spitting. In a Cacochymick Bo-

dy it is without danger ; But if in a Cholerick, dry, Consumptive or Heſtick body it is perilous, and in the end will deſtroy them : however it is of difficult Cure ; and if the Patient has long accuſtomed himſelf to it, almoſt impoſſible.

XLVII. *Aphtha*, Exulcerations of the Mouth, which happen chiefly in Children. They are without danger and eaſily cured, if they ariſe not from any malignity of the Parents, which may partly be diſcerned by their Healthfulneſs, Soundneſs and Vigor : and partly from their free- neſs from any kind of Scabineſs. If in Children they be black and have a kind of Cruſtineſs over them, they are evil, malign and deadly. Thoſe which are Recent, are more eaſily cured, thoſe which are Inveterate, not without much difficulty, becauſe of the Quick ſenſe of the part, which by ſharp Medicines is irritated.

XLVIII. *Corroſion of the Teeth.* If it be inveterate, and the Corroſion be far gone, it will ſcarcely admit of Cure ; ſo much the more if a malignant Ptyaliſm went long before : But if it be Recent, and great care be taken once or twice a day in cleaning of them, there is hopes : If there be an Ulcer or running Fiſtula, they are hardly ever to be cured, unleſs the Tooth be wholly pulled out by the Roots : theſe little riſings altho' they may be broken, they will yet grow up again anew, ſo that the Ulcer cannot by any means be healed.

XLIX. *Nigredo*, Blackneſs of the Teeth : if it has not corroded

ed nor putrefied the Teeth, and is Recent, it is eaſily cured : But if it be inveterate and old, has corroded the Teeth much, and is accompanied with a flux of malignant humors, it will ſcarcely ever admit of any remedy.

L. *Excreſcence of the Gums.* While it is ſmall, Recent, and of a good Color there is eaſy cure : but if it be inveterate, grows great, or Ulcerates, not without very much difficulty : If it once degenerates into Cancer, it is then paſt all hopes, and ſo much the more, becauſe the part is ſo ill to be come at, whereby Section cannot conveniently be done without vaſt pain, and apparent danger.

LI. *Inflammation and Ulcer of the Tonſils.* If the Inflammation and Tumor be great, and will not ſuddenly yield to remedies, there is great danger, and ſo much the greater if the Tumor be on both ſides : If it comes upon a malignant Fever it is mortal. Ulcers if they be without a Fever, have the leſs of danger in them : thoſe that happen in the Summer, are worſe than thoſe that happen at other times. Sometimes they happen without an Inflammation preceeding them, from ſome corroding humor falling upon thoſe parts ; Or, from ſome malignant Vapor aſcending to them, which commonly happens in the French Pox, and ſometimes (which I once ſaw) in a Struma ; Or, from a Peſtilential matter. Thoſe which are ſmall, clean, not deep, not inflamed nor painful, are mild and gentle. Thoſe which are broad, hollow, naſty or ſelfthy, white, or black,

black, or livid, or black and blew, are malignant and poysonous; which if they descend very deep, they breed an Eschar or Crustiness. Those which creep about the jaws

cause a difficulty of Breathing. But if by the Trachæa Arteria, they penetrate into the Brest, then they strangle the Sick the very self same day.

CHAP. XL.

Of Diseases of the Middle Ventricle or Breast.

I. **T**ussis, a Cough suddenly ceasing, upon an Obstruction of the Lungs, in aged people shews Death is a coming.

If it proceeds from External Causes, provided nothing be fallen into the Trachæa Arteria, it is the less dangerous. If it be conjoyned with a cold constitution, it is the more Violent. If it proceeds from matter in the Lungs, with a Catarrh; and in Aged people more dangerous, especially if it be Vehement and of long continuance; for then at length it bringeth to Spitting of Blood. In a Fever it shews that an Apostem will soon Succeed. If it remains after the termination of a Fever, it threatens a Relapse.

II. *Asthma*, if it happen in the French Disease, is incurable. In Children, if it be not speedily cured, it turns into a Catarrh, and Death ensues: in Men, it generally ends in a Cachexia or Dropsie: and in most, it is hard to cure: if it turn to a Pleurisie or Peripneumonia, it is mortal.

An *Asthma* in Old people is difficult to cure: if the sick be rendered thereby Gibbous, and caused to go stooping with the Back bunched out, there is but small hopes of Cure; so also if it be with an acute Fever, because that the matter causing the *Asthma* is so dried, that it is made unfit to be cast forth; Or, if the strength be much weakened, whereby the Sick soon falls into a Syncope or Swooning fits.

III. *Pleuritis*, a Pleurisie, in old people, or asthmatical persons, or such as have had it often, is dangerous; if the Fever be violent, and the Breath be fetched with difficulty, no Matter being raised, or the Spittle be Bloody, or very white, green or black; or if there be much spitting and no ease, the case is dangerous: by Sect. 14. cap. 30. but vomiting Cholera is a good sign: by Sect. 13. cap. 31.

If the Spittle be speedily concocted, and easily cast forth; Or, if on the fourth day the Sick spit forth that which is light, white, equal, by coughing three or four times, and

be terminated on the seventh day, or at farthest on the eleventh or fourteenth day; Or, if on the Critical day there happens a flux of Blood at Nostrils, the Hæmorrhoids, or Womb, with Signs of Concoction; Or, if there be a Metastasis or Translation (which is rare indeed) of the matter to the Joints, there is hopes of an easy and speedy cure. If the Spittle be thin and Ichorous; Or, if much Yellow Choler be mixt with the Spittle, for a long time after the beginning of the Disease; Or, if it be yellow, sincere, or very watery; Or, if the Spittle be glutinous and clammy contracted from a burning heat; Or, if it be frothy, and full of greenness like rust, or black, shewing the pravity of the humor, and extinction of natural heat: Or, if much striving and reaching do not stay the Cough, and make the breathing easy: Or, if after 14 days it turns into an Empyema, or a Peripneumonia; Or, if it befall aged people, who for want of heat cannot concoct the matter; Or, if it befall thick grass Bodies used to exercise; Or, if it follows an Old disease, or an evil habit of Body, the cure will be very doubtful. If little or nothing be spit forth; Or, if the Pulse be hard, little, and thick: Or, if there happens in the beginning a flux of blood without ease of the Symptoms in which case commonly the Sick dies on the fourth day;) Or, if the Pleurisy be so great, as that the Stomach and Liver be drawn into Consent, so that a Diarrhæa, follows upon it; Or, if it invades Cachectical Body, after some Chronic Disease; Or, if with the

Spittle there be a noise and rattling in the Breast, with a dejected countenance, dimness of sight; Or, it be accompanied with the Yellow Jaundice, the Disease is for the most part (in all these cases) Incurable. Lastly, in an Exquisite Pleurisy, where the spittle is Bloody, or Yellowish, if it suddenly vanishes without any apparent cause, the Sick is immediately surpris'd, with dotage.

IV. Peripneumonia, is dangerous if it follow a Pleurisy, and for the most part mortal.

The cure is hopeful if the Spittle being of a redish, yellowish color, there appears any signs of concoction in the Lungs: Or, if the Apoplexym be sent forth into the Ears, or the inferiour parts of the Thorax, and so either turn into a Fistula, or is derived unto the Thighs. It is doubtful, if there be want of Spittle; Or, if there appears or breaks out (with much and thick Urine) that Sweating which did at first arise about the Neck and Head; because those Sweats are thought to proceed from Suffocation, Force, and Violence. If the whole Lungs be affected, so that it extends it self to the side, it foreshews a resolution or Palsy: Because the Blood flowing largely into the great Artery, fills thereby the Intercostal Arteries, which causes little branches passing through the holes of the Vertebrae of the Thorax into the Spinal Marrow so swell, whence the Nerves passing from the said Spinal Marrow are compressed, thereby causing a Palsy. If a Quinzy Succeeds, and Blood breaks forth violently out of the Jaws, the Sick dies

within seven days ; Or, if the Sick escapes, then it becomes purulent, and is not to be cured without much difficulty.

V. Empyema, an Ulcer of the Lungs having green Pus, livid or froathy, brought up difficultly, and a loose Belly, is mortal, or very dangerous, and contrariwise : if the matter be not spit forth in forty days, it turns into a Consumption : Suppuration on both sides is more dangerous than that of one, and that on the left side is worst : if the matter flow much by Stool and Urine, and the Sick be very strong, it indicates Recovery.

If it be rather on the right side than on the left, and that the Sick be strong ; Or, if upon the opening there flows forth a white mitter or corruption, and the Feaver leaves the Sick the same day, they presently desiring meat, are freed from thirst, and have small and laudable Excrements ; Or, if the sick voids the Pus without pain or great Coughing, the Cure is hopeful, and the Sick may escape. Hippocrates Prog. 2. Text. 63. But if the Feaver leaves them not, or it returns again with Thirst, want of Appetite, Looseness, and a Pus, livid, green or frothy comes forth ; Or, if the whole Thorax be lifted up in Breathing the whole cavity being possessed ; Or, if upon Lancing or Burning the Pus that issues be of ill color and savor, or somewhat Bloody, or water flow forth in great quantity ; Or, if the Pus (in searching) colors the probe like as by fire ; the Sick for the most part dies. If an Empyema be not spit forth in forty days, it turns into a

Consumption which brings Death. Hippocrates, Sect. 5. Aph. 15. suppuration on both sides of the Thorax is more dangerous than in one, and that on the left more dangerous than that on the right.

VI. Hemoptysis, spitting of Blood, in general is evil, especially from the Lungs, Hippocrates Sect. 4. Aph. 25. it foretells a Contumtion, if it be not critical, or in Women from Obstruction of the Menstrues.

If the Blood comes forth by Diapedesis or Rarefaction as it were Sweating, it is less dangerous than by Anastomosis, an Apertion or opening of the mouths of the Vessels : that by Diairesis, Erraption or Corrosion is most dangerous for unless it be healed within three or four days, there comes an Inflammation, which being suppurated produces an Ulcer, from whence comes a Consumption, Hippocrates Sect. 7. Aph. 15, 16. But Galen saith, That by Diairesis is incurable, which is not always true.

VII. Atrophia, Tabes, a Consumption is difficult to Cure but if it be but newly began it is curable : if a Consumption comes with an acute Disease or the consumptive fall into an acute Disease, or spitteth stinking Matter, or cannot spit at all and have a Looseness, Death approaches.

If it has been of a long continuance, and the Sick is perceived to pine every day ; and there be also thinness of the Face, hollowing of Eyes, Jaw bones stick out, and the countenance be ghastly, the Sick is incurable : So also if Physick

little or no Operation, for it shews Obstruction so great that nothing can remove; Or, if the Food comes away, almost as crude as it is received, whereby is seen the weakness of the digesting faculty, and an almost extinction of natural heat; Or, if the Urine or Stools be black, and the Sick still grows worse and worse; Or, if the Stomach either comes or goes away of a sudden without an apparent cause; Or, if the Sick has a violent looseness for a long time, all hopes of cure is past. If a long preceeding looseness stop suddenly of its own accord; Or, the Leggs, Thighs and other parts swell as if there were a Dropsy; Or, if those Swellings break; Or, if of a sudden, without any preceeding reason, the Sick becomes hungry, and devours all things that come near him, and he seems very lightsom and cheerfull, the Physician may safely predict that death is at the Door.

VIII. *Dolor Ventriculi*, Pain of the Stomach is dangerous, if it be accompanied with an Acute Continual Fever: if the extremities be cold, Death is near: if Worms or Wind cause it, it is less dangerous; if Wind cause it, and it cannot be removed, a Tympany follows.

If the pain of the Stomach befalls them who have no Office of Exquisite sense; Or, from Visceration or Putrefaction or Convulsion by Poison, it is absolutely past all hopes of cure. Sometimes from Worms gnawing the Stomach great Symptoms happen, of which the Sick suddenly dies. If the Distemper gets Wind, is stubborn and ha-

bitual, it is not without danger, and oftentimes turns into a flatulent Dropsy. Lastly, the danger is either more or less, according to the malignity of the Cause, and Vehemency of the Symptoms.

IX. *Palpitatio Cordis*, Trembling of the Heart is dangerous in acute Diseases: if it come of a Tumor, or is peculiar to the Heart, it is incurable: Galen saith, Youth or middle Age affected herewith, live not to be old.

It is not only a very difficult disease to cure, but often very dangerous, being very acute in every particular Paroxysm, but of a long continuance in regard of its intermitting and frequent returns: if it proceeds from the coldness of the Heart; Or, if it continues long, and from year to year; and make many Recidivations, it then for the most part terminates and concludes in Death. If it proceed from a malignant or poisonous Vapour (where in there is present an Extraordinary Vehemency of Motion) it turns into a fainting of the Heart, and a Syncope or Swooning fits.

X. *Syncope*, Swooning, often without manifest cause, they will dye suddenly: with manifest cause, it is less dangerous: if with a Fever, it is deadly.

If it be only from a Simple Distemper of the Heart; Or, if it comes from evident and apparent causes, and be by consent of some other part, the Disease is curable: But if the Paroxysm returns often without manifest cause; Or, befalls a weak Body; Or, if the Sick be not raised out of the fits; after the

sprinkling of Rose water, or other cold water upon the Face, and the drinking of a little Wine; nor yet even after Sneez-wort has been exhibited; Or, if the Heart primarily lyes and labours under this particular Disease; Or, if it happens in a Fever, with an Inflammation of the Stomach and Liver, the Disease is past cure. If it proceeds from crude humours, transmitted to the Heart, its Veins, Arteries, Capsula (or Cistis of the Heart) and parts adjacent, it foreshews an Hydroptical habit of the Body to ensue.

XI. *Pica, Malacia, Kitta*, depraved Appetite may be of long continuance, but is seldom dangerous: if it be not cured, Obstructions, Cachexia's, Dropsies, and Pains of the Stomach follow.

If it be caused through obstruction of the Terms or Hemorrhoids, it vanishes upon producing them. If it be neglected, nature will sink under the burthen and great Diseases will follow, for if the first concoction be hurt so must the second and third, from whence comes great Obstructions, and from thence many other evil, and pernicious distempers. If the humour be sent in too great plenty to the Stomach, and partake of greater malignity, it sometimes produceth violent Cardia'gia's, and other evil Diseases of the Heart; from whence Faintings, Swooning, and sometimes Death follows. If the sick desires sharp and sour things, it is a good sign; if the contrary, it is evil, and the Disease is harder to be cured. If Women abstain from Trash, and begin to eat good Food

with a savor or relish, it foreshews health a coming. Women with Child are commonly freed from this Disease about the fourth month, (because then the Child is grown bigger, and so consumes more of the humors, the other unnecessary part having also been sent forth before by Vomiting :) But if it lasts longer, it is dangerous, and has taken deep Root, which will difficultly be pluckt up.

XII. *Vomities, Vomiting Choler and Flegm* (if on a Crisis) is good; so also after a long Flux of the Belly, because there is a Revulsion of the matter to the contrary part: see Sect. 13. Cap. 31.

If the Sick Vomits all colors, chiefly Leek colour, or black, which shews an exceeding heat in the Veins, and corruption of many humors lurking in the Body, unless it be from Crudity or Critical) it shews the Disease is dangerous, and the cure difficult. Little and Violent Vomittings in a sharp Fever is evil, it not being good to evacuate sparingly in a Crisis. If the matter be blew, livid, or black and blew stinking, it shews putrefaction with an extinction of natural heat, and mortal or deadly. In acute Fevers, Vomiting without mixture of humors is evil, so says Hippocrates: and it shews that there is a great inward Inflammation, such as for the most part overcomes nature.

To Vomiting (called in Gree *Emetos*, or *Emesis*) add Nausea Loathing, which is a Vain desire to Vomit with a sad Trouble, heat, and Anxiety, caused either by some matter offending

the Stomach, either in Quantity or Quality, or both, or weakness of the Stomach, or strength of its upper Orifice, where by it voids nothing by the mouth, but a thin watery humour. It differs from Vomiting only in degrees, for both are the Motions of the Stomach, laboring to expel heterogeneous things contained therein.

XIII. *Anorexia*, want of Appetite, if it proceeds from the want of natural heat, it is far more dangerous, than if caused by the abounding of evil Humours. In Children it is more dangerous than in men. If it be in the declining of a Disease, it signifies a Relapse.

If it happen to Children, it shews a great preternatural excess, because they are great eaters and want much nourishment. If it falls in the declination of a Disease; Or, from the long continuance of it; Or, from Weakness; Or, from immoderate evacuation, it shews an Extinction of natural heat, and threatens a Relapse. If it afflicts in a Disease of long continuance with sincere stools, it shews an Extinction of the Appetitive faculty, either by reason of some extraordinary cold; Or, of some matter mightily putrefied, whereby the cure is absolutely desperate. If it arises from the Brain, by the hurt of the Nerves of the Sixth Conjugation, the Cure will be very doubtful. If in some Diseases, there presently follows it a very great hunger to meat or Food (no Crisis preceeding, nor an abatement of the Symptoms of the Disease) it not only signifies an hurt of the Brain, and an extinction of the sensitive

faculty, but Death suddenly to follow; this I have many times observed.

XIV. *Fames Canina*, Dog like Appetite. If it continues with Vomiting and Purging it is dangerous, and commonly degenerates into a Cachexia, Dropsy, Lethargy, Consumption, &c.

If it comes from External causes only, it is not dangerous, being presently removed: if it proceeds from Worms, it is taken away by removing them; but if it follows great evacuations, wasting, and melting of the Body, especially if after meat when the Belly is full, there comes a Fainting, it is very dangerous.

XV. *Bulimus* ἀπὸ τοῦ σῆς ἢ λιμῆς, A great Periodical Appetite. If it happen in Chronical Diseases, it is incurable, if after Feavers and other like Diseases, it threatens a Relapse.

Sometimes *Fames Canina*, & *Boulimia* are confounded and used for the same thing; but they are thus distinguished, In *Fames Canina*, after much feeding, they Vomit like Dogs, and sometimes purge when Nature throws down what it cannot concoct. In *Boulimia*, or *Bulimus*, Vomiting doth not follow, but sometimes *Leipothymia*, they concoct all, and if they have not presently more are sick.

XVI. *Polidipsia*, *Sitis Morbosa*, Excessive thirst. If it comes from External Causes, it is most free from danger because it is soon allayed with Drink: that which comes from Internal causes is more or less dangerous, according to the Differences.

That which comes with Feavers and other Diseases not hard to cure,

cure, ends with them; but if it comes from great and dangerous Diseases (as a Dropsy, in which the thirst is not slack'd, but rather increased with Drink) it is very dangerous.

XVII. *Concoction hurt*, Or, in one word *Crudity*. If it comes from External Causes it is easily remedied, by removing those Causes, and keeping a good Diet: If it proceeds of humours brought from other parts into the Stomach, it is not difficult of Cure; but more hard when generated of humors in the Stomach; but if those humors be taken away before they create any Disease in the Stomach, the Crudity, will be removed.

1. *Ἀσέψια*, Apepsia, *Concoction Abolished* is worst of all, because the whole nutriment of the body is frustrated, from whence comes pernicious Diseases, as Lientery, Dropsy, Atrophia, &c. 2. *Βεβραμένη*, *Concoction Diminished* brings with it, as attendents, the Cholick, Cachexy, Dropsy, Jaundice, Green-sickness, 3. *Δυσέψια*, *Dyspepsia*, *Concoction Depraved*, forebears Obstructions, Scabs, breakings out, Feavers, Greensickness, Melancholy, Scurvy, and such like.

XVIII. *Singultus*, the Hicough, if it be accompanied with Fainting; Or, if it befalls Old people, purgeth immeasurably; Or, if it comes from an Inflammation of the Liver; Or, if it happens in a sincere Vomiting, because there is signified some great burning of the part about the Stomach; Or, if it invades the Sick after Vomiting, by

which the Brain or Stomach are known to be much Inflamed; Or, if it proceeds from the Ileum, wherein some Nervous part having consent with the Brain is affected: Or, if it be with Loss of Speech; In all these Cases the Cure of the Disease is very doubtful. But if it happen with a Delirium, wherein acrid Vapors are raised up to the Head from the Stomach inflamed: Or, the Brain being inflamed the evil is communicated with the Nerves of the Orifice of the Stomach; Or, if it happens in Swooning fits, or Convulsions: Or, if it arise in a deep sleep: the Disease is incurable.

XIX. *Dyspnoea*, or the Lungs. If it be without matter it is without danger and easily cured: If it be with matter it is more difficult, and that also in respect of the Situation of the part.

This with matter is properly an Obstruction of the Lungs, which although Authors make a difference between, it is needless. Now because Lib. I. Cap. 53. Sect. 19. we were a little too Brief, we shall here more fully explain our selves. An Obstruction of the Lungs, is an interception of the Vessels thereof by reason of matter stopping, or compressing; Or, by Exsiccation, causing a Cough, oppression and difficulty of Breathing. It is either 1. From an Obstruction of the Rough Arteries by Blood, or a compression of them by Blood: Or by some humor, chiefly Petuitous and plentiful flowing forth only into the Membrane that surrounds and grinds in the Throat, whereby

by it hinders the Voice and causeth an Hoarsness: if it falls into the Hollow and Channels of the Throat, it causeth little sleep, Cough, with a certain sense of Acrimony that provokes to Coughing: This comes commonly from a *Catarrh* falling from the Head, which in length of time is changed into Glassy or plaster like *Flegm*, and causes at last an *Asthma*; there is a kind of dry Cough, wherein little is expectorated, difficulty of Breathing, Wheezing, and the like: It may also come from Purulent matter breaking forth from some *Aposteme*. 2. From an *Obstruction of the smooth Arteries*, known by difficulty of breathing both in the beginning and increase of the Disease, an unequal and various Pulse: a Palpitation or beating of the Heart: It is caused, either from a *Pituitous*, viscous, clammy humor, wherein the Pulse is more equal: Or, from a little Tumor, wherein the Pulse is hard and unequal. 3. From Causes that in their whole kind are *preternatural*, as, first an hard and solid substance or Tumor included in its proper *Cistis*, and producing an *Asthma*: Secondly. Little Swellings or *Aposiems* from matter collected in one part (without any token of a preceeding *Catarrh*) which swelling stick close to the *Aspera Arteria*, which are either crude and raw, being never suppurated, nor joyned with a Feaver, and are therefore difficultly known: Or, such as are suppurated, wherein the Pus is also contained in its own *Cistis* or Bladder: the Sick is then of a

black and blew, or livid Color, Tongue clammy, Urine dyed, and a matter compacted almost like to small Pease, included and wrapt up in a small Membrane, ejected from the Lungs, after some violent Motion: there is also a troublesome Cough, difficulty of Breathing, and a continual pain in the middle Ventricle. Now unless 1. The Maturation be speedily perfected, 2. When perfected, unless the *Aposteme* be suddenly broken. 3. Unless it tends upwards, and be cast forth by Coughing. 4. Unless the whole Pus or matter be cast forth. 5. Unless the Cavity in which the Pus was contained, be perfectly united and healed as formerly, the Patient may be declared incurable.

XX. Wounds of the Lungs. They are always dangerous, but if the profuse flux of Blood be stanch'd and the Inflammation of the Lungs be prevented: Or, the Blood being cast forth into the Cavity abide there, there is hopes of cure.

XXI. *Phthisis*, An Ulcer of the Lungs. If the Disease is old, it is for the most part incurable: but if new more easy, especially if the party be but a coming into it. The reason why an Ulcer of the Lungs is so hard to cure, is because it is kept open, by the continual motion of the Lungs and by Coughing: the Ulcer ought to be cleansed before it is healed, but all abstersives irritate the Cough, by which the Ulcer is kept from healing; moreover the lost substance of the Lungs cannot be repaired; nor can Medicaments in their full strength easily pierce so far, their force and Vertue being generally gone before they come at the place.

But

But a Phthisis which comes from a small Ulcer ad Recent, although it be difficult, yet it is not incurable, if proper medicines be timely Used: more especially if the Sick be strong, spittle white, even, of one color, and easily raised and cast forth: if the Catarrh falls through the Nose and the Fever thereupon abates: if the Appetite be good, there be no thirst, the Belly bound, or in good order, as also if there be a large and hairy breast, youth, and a good habit of Body: But they whose spittle, stinks have a severe Loosness, or cannot spit, or whose Legs and extreame parts suddenly swell, as if there was a Dropsy, are near death; Or, if a Phthisis follows upon an acute Disease, it kills speedily.

XXII. Vices of Breathing.

They are not easily cured: yet the probabilities thereof must be learned from their Causes, which are more or less difficult, according as the Causes are greater or lesser: In Infants and old people they are almost without hope, and often end in a Cachexy, or Dropsy: If a Pleurisy or Peripneumony follows upon them, they are for the most part mortal.

XXIII. Tumors of the Duggs.

An Inflammation is easily cured: An Oedema, with more difficulty: A Ventoisty is very dangerous; If it be inveterate, and without pain, especially if it once begin to degenerate, the hope of Cure is small. But the Prognosticks of these particular Tumors are derived from the nature of the General, which see in their proper places.

XXIV. Scirrhus of the Duggs.

It is hard to Cure, if it be old and inveterate, hard, and without pain: especially if it resem-

bles the Color of Capers, or hairs grow therein, it is incurable by Medicins, but may be attempted by manual Operation. But if the whole Breast or Pap waxed hard, and be fixed to the Thorax or Chest, manual operation is not to be used without great danger.

XXV. Cancer of the Duggs. It is exceeding difficult to cure if not exulcerated: if exulcerated it is scarcely possible without the help of Chyrurgery: nor is it then to be attempted, if it be not Loose, or if it grows fast to the Ribs.

XXVI. Distemper of the Stomach.

If it be without matter, the cure is facil and easy: if with matter, much more difficult: yet a dry distemper of the Stomach without matter, is the more difficult, because with the Feaverish heat it induceth a Consumption: if it be with matter from flegm, the danger is less, yet a Dropsy or Cachexy, may be feared; if from Choler, and the pain be exquisite, or there be a great pricking, some other acute Disease is to be expected.

XXVII. Tumor of the Stomach.

If the Inflammation apostematates it is more dangerous: if the Apostem breaks in the Internal part, it is better than if the matter falls under the peritonæum, because in the one it is easy to be purged forth, in the other not. An Inflammation is difficultly cured if it befalls one recovering, because it signifies a Relapse: if it be in acute Feavers, it shews the Natural heat to be almost extinguished; if it lasts long it ends in a Dropsy Tympanites.

XXVIII. Ulcers of the Stomach.

They are cured with much difficulty, because abstersives cause pain

pain, and because being always moistned by the Chyle, they cannot be dried. If they be inveterate,

or continue long, they cause a Lien-
teria, and at least a Consumption;
and Death follows.

CHAP. XLI. Of Diseases of the lower Ventricle or Belly.

Colicus dolor, the Cholick, if it be gentle, and the Belly soluble, it is easily cured; but if great, fixed, and the Belly bound, with Watching, Vomiting, Hiccough, cold sweats, and coldness of the extrem parts, it is deadly: if it come of Cholerick Humours, it sometimes degenerates into the Palsie, Falling-sickness, or Gout. The Cure ought to be attempted with all speed, because the pain dissolves the strength, and dissipates the spirits, drawing the principal parts into consent. If the sick vomits often, and cannot keep their drink, voiding little or nothing: Or, if the disease degenerates into an Aposteme of the Colon; Or, if the matter which was contained in the Hypochondries be cast forth and carried to the Spina, and pass into pains of the back: Or, by a malignity contracted does produce the falling sickness, the hopes of cure are but small. If the whole Gut is affected, it is very dangerous. If it is from sharp and Cholerick humors sticking in the Coats and Vessels, it will be of long continuance, and afflict the sick with many Relapses.

II. Iliaca Passio, accompanied with the Stranguria or Vomiting, for the most part, is deadly.

If upon Vomiting up of Excre-

ments either Deafness or an acute Feaver, Or, with the same a Tumified Hypochondry, or swellings under the Ears do follow, the sick is very dangerous, and the hope of cure very small. If the Hiccough, or Vomiting, or Convulsion, or Dotage succeed; Or, if it afflicts old people, Or a Strangury succeed, (unless a Feaver happening and dissolving the matter, causes Plenty of Urine to flow forth) the sick is in a very doubtful condition. But, if the guts be affected but in part: Or, it befalls children, who have strong innate heat, able to dissolve, and humours less sharp and biting, there is great hopes of a successful Cure. If it proceeds from Poyson, Or, from an Ulcer, or a Tumor, as a Scirrhus with a continual hardness, or a Cancer, 'tis scarcely curable.

III. Dysenteria, a Bloody Flux caused by black Choler (and not critical) or loathing of Meat, and a Feaver, Or if pieces of Flesh be voided, or there be much watching, great Thirst, black bloody, stinking Stools, without mixture of humours, Hiccough, cholerick Vomiting, Pain in the Liver and Midriff, it is for the most part deadly: if Choler or sharp Diet be the cause, it is easily cured.

If black Choler be voided of its

own accord, no Feaver preceeding, nor signs of Concoction appearing, (whereby it differs nothing from an ulcerated Cancer) if Convulsions and raving follow, (shewing the matter carried to the Head and Nerves) Or, if pieces of flesh be voided (there being no regeneration of the substance of the Guts, nor drawing a Scar over so great an exulceration: Or, if it follows upon an acute Disease, wherein the strength and spirits are already wasted: Or, if the Hiccough follows, Or, if a black pustle like a Vetch comes behind the left ear with a great Thirst: all these Symptoms declare the hope of cure to be in a manner past: and the last of them signifye Death to approach within about twenty daies. The Cure will be very difficult in women because of their tenderness and weakness: in children because their guts are moister, and therefore more subject to Putrefaction: in old people, where there is weakness and extinction of natural heat, and many sharp humours. It will be doubtful if choleric Vomiting seize at first: Or if stools be continual, or if they stop, or if a new flux, bloody like an Hepatic flux, or a filthy Diarrhœa follows: Or, if loathing of food, afflicts with a Feaver, which shew the stomach brought into consent, and an ulcerous putrefaction in the Guts: Or, if it happens to a Woman great with Child, and ceases not after Delivery, and coming away of the Afterbirth: Or, if the stools be sincere, viz. without mixture of wateriness: Or, if the effusion of pure blood be joyned with it, which shews the greater Veins are corroded; Or if it invades with a Feaver, or divers colored stools, or with an In-

flamation of the Liver. But if it follows madness, because it shews a translation of the matter from the head: Or, if the Excrements be changed, unless the change be to the worse: Or, if it happen to such as are vexed with the Spleen, because Melancholy humours are carried away: Or, if belching, or breaking wind backwards succeeds, which are signs of Concoction: the hopes of cure are evident. If it be of the small guts: Or, the guts be perforated: Or, it proceeds of salt flegm; in all these cases the Disease is scarcely curable.

IV. Lienteria, a flux of matter, if it last long is very dangerous, and the sick falls either into a Dropsy or Atrophy: if it follow other Diseases it is generally deadly. This Disease proceeds from a great prostration of the natural heat, and a weakness of the Tone of the Stomach: It will be difficult to cure, if it be supervenient to acute and chronical Diseases, because the strength is impaired. If it comes by fault of the retentive Faculty through a cold Distemper, and sour Belchings which were not before, be supervenient to it, of long continuance, it is a good sign. If by default of the Expulsive Virtue, by sharp humours, it will be hard to cure, especially if it be of long continuance, because it passeth into a Dysentery.

V. Diarrhœa, a Looseness (if critical) is good: if Symptomaticl, evil: the Egestion yellow, green black, blew, or of mixt colours is evil: in a woman with child, it is dangerous: in a Dropsie it shews Recovery, if the sick be young, strong, and the Disease but

but begun : and contrariwise.

If it befalls a great bellied woman, it is dangerous, because it withdraws the nutriment from the child, relaxes the Ligaments, and by raising up evil Vapors causes abortion. If it happen after an Ophthalmy, wherein the matter is transmitted from the upper parts to the lower ; or, if Vomiting succeed wherein there is revulsion of the matter from the lower parts to the upper : or, if it be supervenient to the Dropsy, though it be violent at the beginning of the Disease, in full strength, and the bowels sound, there being made an evacuation of matter consuming the Disease from the habit of the whole Body by stool, it will be the more easily cured, and is less dangerous. To have a flux for a day or more, provided it stop within seven or eight daies, is healthful. If it be with a fever is difficultly cured, especially if it accompany a disease of long continuance, with loathing of food, and the stools be sincere, viz. without any watery moisture mixt, which shews a burning up of the native moisture. If it follows upon a Hætick or a Consumption, a Phthisick, a burning Fever, or an Inflammation of the guts, it is mortal, especially in such as are Hætick and Phthisical, whose hair falls off. If a flux from the obstructions of the Mesenterick veins lasts long, a Consumption follows. If a Diarrhæa be (without a Fever, in a person sound) from taking cold, the serous humour is thereby repelled from the outward parts to the inward, and into the greater passages of the Vena Cava, which at last being carried to the Bowels, and to the creeping branches of the

Mesentery, flows into the capacity of the Guts ; this is without danger.

VI. *Tenasmus*, Desire of going to stool, is easily cured, but yet if it be of long continuance, and it comes of Melancholy, it hazards a Cancrous Ulcer; in Women with Child it shews danger of Abortion. If the cure be neglected, it oftentimes degenerates into a sordid Vicer, and that sometimes passes into a fistula, Celsus, lib. 4. cap. 19. saith, That a *Tenasmus* is easily cured, and that of it self it never kills any. But Gallen, de usu partium, lib. 5. cap. 4. accounts it among the chief Diseases of the Belly. And Hippocrates sect. 7. Aph. 27. saith, If a woman with Child have a *Tenasmus*, she will miscarry : for continual straining at stool disturbs the Womb, and the same muscles which serve to expel the excrements, are employed for delivery.

VII. *Hæmorrhoides*, the Piles if critical are healthful, and so in Women, whose Terms are stopt; otherwise the immoderate Flux is dangerous, bringing weakness, coldness, Cachexia, Atrophy and Dropsy. A flux of the Hemorrhoids from external Causes is thought by some to be more dangerous than that from Internal. The swelling Hæmorrhoids are seldom dangerous, unless so inflamed as to threaten a Gangreen; but otherwise they may extremely torment the sick. If they come to suppuration or an Vicer, they often leave a Fistula, for the most part incurable, because of the tenderness of the part, and over great moisture, which hinders the healing. Suppression of the Hemorrhoids,

if

if it be of long Continuance, threatens a Dropsy, because of the turning back of the blood to the Liver; Or, otherwise, Inflammation, Apostematation, or a Fistula.

VIII. Lumbrici, Vermes, Worms, coming forth in the beginning of a Disease is almost deadly, whether they be alive or dead, for it is by great putrefaction they are sent out: in the end of a Disease it is good, if concoction appears.

Worms coming forth at the beginning of a Disease without dung, are certainly evil signs, for they signify great Crudity and want of nourishment. Many are worse than few, great than little, and they are oftentimes dangerous, and bring great Diseases, as violent Feavers, dog-like Appetite, doting, Epilepsie, cholic, swooning, speechlessness: if they are living, red and of divers colors, or come forth in the Augment or malignity of the disease, they are symptomatical, and not easy to be removed.

IX. Emphraxi, Obstructio Hepatica, Obstruction of the Liver, newly begun, may be easily cured, if old, with great difficulty: what comes of crude, slimy humours is worse than that which comes of Wind: it is the root of many Diseases, as, Putrefaction, Feavers, Inflammations, divers fluxes constant and vehement, Cholic, Jaundice, Cachexy, Dropsy, Struma, and divers others.

The Cure is the more difficult, by reason of the narrowness of the Veins of the Liver, and because that many Diseases both depend and follow upon it. If it be inveterate with a Feaver, it produceth a Jaundice, Scirrhus, or Dropsie. That in the Gibbous

part is the easier to be cured, because of the penetration of Medicines, and the emptying of the obstructing matter, by a larger Passage. If it comes of wind, or crude flegmatic humors, it is often cured by a Feaver: because the heat thereof does discuss the Wind; and makes the flegm more thin and apt to flow.

X. Icterus, the Jaundice, happening in a Feaver before the Crisis, is dangerous; and contrariwise, if on a Critical day; if it comes upon an Inflammation of the Liver, it ends in an Aposteme; if upon a Schirrus, it ends in a Dropsy; and in both Cases it is most dangerous: upon Obstruction of the Gall, it is curable, because its passages are nearer to the guts. Hippocrates, Sect. 4. Aph. 62. saith, They who in a Feaver have a Jaundice, before the seventh day, viz. the Critical days, are dangerous; but if it be before the seventh day with chilness, in a cholerick Feaver, and it be critical, the Disease is cured; but if it be without chilness it is mortal. Hippoc. de Victus ratione in Acutis, lib. 4.

XI. Obstructio lienis, Obstruction of the Spleen, if it be of long continuance degenerates into the Scurvey or Schirrus, and afflicts the sick with great pain in the side, and deep Melancholy. It is a stubborn Disease, and of long continuance, by reason of the softness and looseness of the part, which the better detains the humour, so as it cannot easily be discharged. It is easier cured in young people, especially if it be recent; but in old people never, nor scarcely ever in childing women,

recent; but in old people never; nor scarcely ever in childing women, if they be not freed from it immediately after delivery.

XII. Cholera, a Cholerick vomiting or looseness: if its Original be from evil food, when the sharp matter is cast forth, it will end; if very violent, with Convulsions, swoonings, or coldness of the extrem parts, Death is at hand. *This Disease is exceeding acute, and therefore the more dangerous: but there are some in whom this Cholerick Vomiting and Looseness, returning at certain Periods, doth empty all the superfluities of their bodies. If it is vehement in children, it is commonly mortal; but if it be critical to any other disease, and signs of Concoction appear, health ensues.*

XIII. Melancholia hypocondriaca, Hypocondriack Melancholy, with continual pain and giddiness of the head, gives fears of the Epilepsy, Apoplexy or Blindness; if accompanied with a moderate Flux of the belly, Vomiting, or the Hæmorroids, it is good: this Disease is generally long, and seldom cured.

This Disease is truly difficult to cure, by reason of the mighty heap of symptoms; it is seldom mortal, but if a very long continuance, sometimes lasting even the whole Period of life, for which reason it is called, the Disgrace of Physicians: sometime the Patient seems to be cured, and then in a few months it returns again: if it be accompanied with moderate flux of the Hæmorroids, it is good: but if the flux continues long, it is dangerous: it is easier cured, if taken in the beginning, and falls neither in a full

age, nor in a declining: so also men are easier cured than women: the fat and fair, than the lean and swarthy: it is also hopeful, if there be an hæmorrhage of the left nostril: Or, if blackish urines be freely made without a Fever: a thick Urine is also better in this Disease than a thin and watery: it is also good to be loose, bad to be bound: Vomiting, if the sick be relieved thereby is good, but if it continues long, it is dangerous: and a Vertigo, with a continual pain of the head, commonly ends in an Epilepsy, blindness or Apoplexy.

XIV. Calculus Renum, Stone in the Reins, is dangerous, causing Inflammations, Exulcerations, Pains, Feavers, Watchings, Stoppage of Urine, and Death. *Hippocrates saith, It is difficult to cure, if not incurable in old men; if there hath been long and violent pain (the extrem parts waxing cold) Death is at hand: accompanied with an Ulcer in the Kidneys, it is incurable. If bubbles for some daies are seen to continue in the Urine (which shew a great quantity of tartarous and mucilaginous matter.) Or, if the Urine be thin, and lasts so for some time, foreshewing great obstruction: the disease will be hard to cure. If it be hereditary, of Nephritic parents, it is incurable. If the pain continues many daies and cannot be cured with Medicines, there is danger of death; and it is near at hand when they are externally cold, and have cold sweats in the face. Urine first thin, and after thick, having sand at bottom, shews the fit is at an end.*

XV. Calculus Vescæ, Stone in the Bladder, is dangerous as that

in the Reins, but with more probability of cure.

A great stone is scarcely to be cured without cutting, a little one sometimes is: but it is always painful and dangerous. If the stones be like flint, they cannot be dissolved; but if brittle, or soft like Chalk, they may with the long use of strong and powerful medicins be dissolved, broken, or wore away: in Women it is less dangerous, because their passage for the Urine is wider, and it may be brought away without cutting, and that only by enlarging the part. The operation of cutting is dangerous, for many dye under the Chyrurgions hands: for which cause, Hippocrates in his Oath, charges his disciples, That they use it not, but leave it to those whose profession it is only: How to do the work, see lib. 3. cap. 16. §. 7, 8, 9, 10. following.

XVI. Diabetes, Immeasurable pissing, 'tis deadly, if not cured in the beginning, and the sick be young; for it brings a Consumption. It is for the most part incurable, and passes into a Hectick, and dryness of the whole Body, because of the perpetual draining of it: In old men it is more dangerous, and when it comes after inordinate Letchery or after an Ague.

XVII. Dysuria, urine difficultas, Scalding of the water, is not dangerous, unless it continue long, and so ulcerate the neck of the Bladder, but 'tis very painful: if the sick be ancient it is sometimes difficult to cure. If the sick be decrepit, they dy thereof; and in persons of any age, if it continues long, it ulcerates the neck of the bladder. If it be accompanied with a suppression of Urine: it is

yet more painful and dangerous; but you must supputate the difficulty of the cure, from the nature and greatness of the Causes.

XVIII. Stranguria, Scilicidum urinæ, making urine by drops, 'tis very dangerous; if it continue many daies, it is mortal; especially if the sick hath an Hicough or Tenaismus, or it come by a blow or wound on the back bone, or if the breath stink of piss. There is little or no hopes if it come upon an Illiack Passion proceeding from an Obstruction of crude and thick humors, no Feaver following it which may attenuate those humors, and dissipate them.

XIX. Iscuria, Suppressio urinæ, total stoppage of Urine, hath almost the same judgments with those at Sect. XVIII. above. The cure ought to be attempted with all speed, for if it continue above seven daies, it is mortal: moreover the urine may regurgitate into the whole body, oppress the Liver, infect the blood, and cause danger of Suffocation; if the humours putrify, a Feaver is kindled, and if the sick piss not before the seventh day, death succeeds; this more especially, if there be a Tenaismus, a Hicough, or a blow or wound upon the Backbone, or a Luxation of its Vertebrae. There is also no Cure, if there be a deadly Concurrence of many fits. A diminution of the water in malign and acute Feavers is also dangerous, because it is a sign that the Nerves are affected.

XX. Gonorrhœa, Running of the Reigns, in women is hard to cure: if the head of the Urethra be broken by a Catheter being put into the Bladder it is incurable, Veslingius.

If it be by default of the spermatick parts from a cold and moist distemper, it is the more easily cured, especially if recent. If it be a Virulent Gonorrhœa it is much more difficult. A Gleet of a long standing, whether natural or procured by much and violent purging, is very rarely cured. That which is malignant from a Venereal Disease, is also of difficult Cure, not only in old men, but in all other persons, especially if it was forcibly stoppt against Art, before the due time.

XXI. Menstrum suppressio, Stoppage of the Terms is dangerous, and causeth many other Diseases. The stoppage of the Terms sometimes causeth a Fever, Melancholy, head-ach, Apostems, Cachexia, Leucophlegmatia, a Drop sic, Gout, Asthma, Vomiting blood, Green-sickness, Scurvy, &c. If it be of long continuance, and hath exceeded the sixth month (the woman not being with child) the Cure will be difficult, especially if it happens from a perversion of the neck of the Womb, for then swooning fits follow, with vomiting slegm, pain about the Belly, Pecten, and back-bone, as also a Fever happens. 'Tis hopeful, if the Blood be emptied, though through other place, so it be not through the Bladder, for there it doth most of all clot. If it be from a constipation and hardness of the Womb, it is not easily cured. It is least dangerous, if it comes from plenty of good blood, or fat, bleeding, or other evacuations. That is difficult which comes by tedious, long and stubborn obstructions of Viscous and clammy humours. That which comes from distemper only if

the Womb, is the worst, hardest to cure, and most dangerous.

XXII. Menstrum profluvium; the immoderate flowing of the Terms, if great, long, and from exulceration, it is dangerous; and, if she be something old, and grows weaker and weaker, and the flux more violent with Faintings, Death is not far off. The Cure is certainly difficult, if it has been of long continuance; none at all, if it happen to a woman old, or growing old, for in such it is commonly not only incurable but mortal. That from Exulceration is most dangerous and hard, because where the Ulcer is, there some part of the substance of the Veins is perished, which hinders the growing together of the breach. All large and long lasting issues of blood are dangerous, especially those from the womb. If it is caused by Anostomosis, a opening of the mouths of the Veins; or by Diæresis, a breaking of the Veins, here is greater danger, because great quantities of blood, suddenly issue forth, yet are such sooner cured, as hapning commonly in bodies full of blood, and otherwise healthy. If it be by Diapedesis, a sweating or saking of the blood through the Veins, or a passing through by leaping, it is least dangerous, yet of longer continuance; by reason of a continual supply of raw, serous blood.

XXIII. Suffocatio Uteri, Fits of the Mother, are generally of long continuance; young women after Child-bearing are sometimes cured; old women seldom: it is also dangerous to women with Child, and such as lye in, especially if hard labor, or

Abortion went before. It is the more hopeful, if the Breathing be not too much hurt, and if the fits do not return often. It seldom kills the Patient, but commonly sticks long by them, unless Swooning Fits happen also, or some extraordinary Convulsion, or a frequent return of the fits, and a great stoppage of Breath.

That is bad which comes from corrupted seed ; Or, a long stoppage of the Courses ; but that worst which draws many parts into consent. In Young Women it commonly ceases when they begin to bring forth. Sneezing in Hysterick persons is very good, for thereby the malignant Vapors from the Womb are discussed.

XXIV. *Inflammation of the Guts.* If it be Recent and in strong Bodies, the cure is easy : If it be of long continuance more difficult : if it degenerates into an *Apostem* there is apparent danger, more especially if a *Dysenteria* or *Lienteria* follow upon it ; Or, it happens to a Woman with Child. If it proceeds from a Rupture, the Prognosticks follow, according to the Cause. The cure ought to be attempted speedily, for as in other Inflammations, so in this, the evil is acute, and oftentimes turns into a Gangreen and Mortification.

XXV. *Straightness or Obstructions of the Guts.* If it be from growing together of the Guts, it is incurable. If it be from viscous Elegg, long lodged there, the cure will be very difficult. If it be from Costiveness, Inflammation, Rupture, or Worms,

the Prognosticks follow the cause, which you must seek out in their respective places.

XXVI. *Ramex, Ruptura, Kèle, Rhexu,* a Rupture of the Guts. The cure ought not to be delayed, because that the thin and Nervous Membrane cannot easily be conglutinated or united ; as also because that the Guts being sometimes inflamed are in danger of Mortification, whence Death ensues. In Children the Cure is more easy ; in Old people, not without great difficulty. A Relaxation of the Peritoneum is not so difficult as a Rupture thereof ; So also Oskeocele is harder to Cure than Bubonocèle. The judgments of an Omphalocèle, seek out in its proper place.

XXVII. *Falling down of the Fundament.* If it comes from straining, the Cure is not difficult : if from Weakness in Children, and very old people, or such as are emaciated with some tedious Disease, it is harder to be done. If it be by reason of a Tenesmus or of a Dysentery, it is yet worser. *That from a Contusion of the Nerves of the Os Sacrum is dangerous. If it be from an Apostem or Fistula about the Sphincter Muscle, it is almost hopeles : If it be long down without putting up, a Gangreen is to be feared.*

XXVIII. *Costiveness of Body.* A Simple Costiveness without other evil Symptoms is not dangerous : but of easy Cure : if it continues, the Head is affected with Vapors, the whole Body grows heavy, the Concoction of the Stomach is hurt, the Appetite

tite destroyed, the Loyns weakened : But it is more or less hurtfull according to the Cause, if it comes from an Inflammation, or other Tumors of the Intestines, it is very dangerous ; it is contumacious and stubborn if it comes from the Ordure long indurated, whence Cholicks which return after they have been cured ; for though the Belly seems soluble by purging, and many thin Excrements are evacuated, yet sometimes there remains many hard ones in the Guts, which breed new pains, nor can be called out by many Clysters given after purging.

XXIX. *Celiaca passio*, the the Celiack passion : It is a kind of *Lienteria*, but not so dangerous. A *Lientery* shews the Act of the Concoctive faculty abolished : A *Celiaca*, the Act only diminished : therefore the Prognosticks of the one may take place in the other, but in a weaker Sense. If it be long it is dangerous, because it deprives the Body of its Nutriment, whence comes an *Atrophia*, or a *Dropfy*. If it follows great and acute Diseases, it is for the most part Mortal.

XXX. *Inflammation or Tumor of the Intestinum Rectum*. The Disease is difficult to be cured, because the part is indued with an exquisite Sense, as also because the Excrements hinder applications. And by reason of heat and moisture of the place, the Tumor easily *Apostemates*, or degenerates into an Ulcer, or a *Fistula*.

XXXI. *Verruca Ani*, Warts of the Anus. The *Condylomata*

are more troublesome than dangerous, but not very easily removed. *Thymi* are cured with less difficulty if they degenerate not. *Ficus*, if they Bleed, they are the worst of all, and of bad Signification if they should prove Cancerous. *Crista*, have a kind of malignancy, and are hard to cure.

XXXII. *Ragades*, Clefts or Oblong Ulcers of the *Anus*. They are without danger if they be simple, and recent ; Or in a Sanguine Constitution : but if they degenerate into *Fistula's* ; Or become Inveterate, whereby nature has a continued course that way : Or, if they happen in a Melancholy Constitution ; Or, in Old Age, where there is a dissipation of natural heat they become difficult to heal, and dangerous : If they chance to a Woman with Child, and heal not presently, but a *Tenasmus* succeeds, there will be danger of Miscarriage.

XXXIII. *Fistula in Ano*, *Fistula in the Fundament*. These, of all kinds are difficult to Cure, and whether in Old or Young. The Recent is easier cured than the Inveterate. Those which penetrate into the *Intestinum Rectum* ; Or, into the Bladder ; Or, into both ; Or, if it be in the *Sphincter Muscle*, are seldom or never cured.

XXIV. *Fluxus Hepaticus*, *Hepatick flux*, or flux of the Liver. If it be not suddenly cured, it will degenerate into either a *Cachexia*, *Dropfy*, or *Consumption*. It is difficult to be done when in the beginning, and in

young persons; almost impossible when Inveterate, and in old people; Or, when the Disease comes of heat: Or, in them whose Spirit is Bloody, and are somewhat pale or clearly Cholerick. If it comes in Feavers, there follows presently a melting of the Body, and great putrefaction, which presently kills the Sick: but when it comes of cold, it lasts longer, and turns into an incurable Dropsie. The Spurious is dangerous, yet not so evil as the Exquisite, because it comes from a simple distemper of the humors, the Tone and Strength of the Liver remaining Sound.

XXXV. *Obstruction of the Mesentery.* Authors declare this Disease not to be dangerous of it self, because an ignoble part can endure great evils without danger of Death: also strong Medicines may be applyed for the Cure thereof, which being rightly administred, may restore the Sick to his Health; except Hypochondriack Melancholy arise from thence, which is commonly rebellious. Now this part not having exquisite sense, the Obstructions not much disturbing the Patient, are oftentimes neglected, but are the fore-runners of other more dangerous Diseases.

XXXVI *Inflammation of the Mesentery.* This is a dangerous Disease, both because of the Feaver with which the Sick is wasted and dissolved; and because of the putrefaction by which the part is corrupted; Or, by reason that there may follow an Aposteme of the Mesentery. Sometimes the Disease is extended to the fortieth day, som-

times to the eightieth, and sometimes it lasts all the life time. If the matter of the Disease being sent by nature another way, be not perfectly taken away, the Disease after returns again for many years, with a Feaver, or Cholick, or Inflammation. If the Guts be Inflamed also, the Disease is yet more dangerous.

XXXVII. *Apostemes of the Mesentery.* An Aposteme is best known from an Inflammation preceeding, if it come from an Inflammation, for that the Inflammation could not be discuss'd, but must turn into an Apostem, especially if the Inflammation continued twenty, thirty, or forty days. At length, if matter come forth, the Apostem is manifest, being commonly voided by Stool, of divers sorts: sometimes it is sent to the Reins, and cast forth by Urine. Sometimes it breaks outwardly by an Aposteme, wherein, great quantity of matter flows from the Navel, and sometimes Worms therewith. When the Apostem is broken, and matter flows forth, it is certain that there is an Ulcer in the Mesentery, which is sometimes soon cured; and sometimes it is of long continuance bringing rottenness upon the whole part, and a Gangreen; for which cause sake, an Apostem may always be said to be dangerous: if it brings not a Gangreen, the Sick then falls into a Dropsy or a Consumption. Sometimes the Aposteme breaking, and sending very stinking matter into the Cavity of the Belly, the Patient dies suddenly. A Scirrhus of the Mesentery, (known by its hardness and being void of pain) is least

least dangerous : if it be Recent, it is curable ; if Inveterate, the Sick falls into a Dropsy.

XXXVIII. Pain of the Mesentery. The Cure is both difficult and doubtful, if the pains be low, because they are the stronger ; Or, if new Obstructions succeed, by which the Disease grows worse : Or, if the pains are felt above the Navel, and not dissolved by Medicine, because they end then in a Tympanites ; Or, if pains of the Reins succeed by reason of the nearness of the Fountain of Corruption. But there is little or no hope if Vomiting, Hiccough, and cold Sweats afflicts the Sick ; especially if they last long, the Sick be Feaverish and loaths his food ; because it is to be feared, that the pain proceeding from the Head should suddenly kill them, after the manner of Convulsions, if Watchings be Vehement : It is also evil in the highest degree, if a Headick assail the Sick, or there be a suppuration in the Peritonæum and neighbouring parts.

XXXIX. Inflammation of the Liver. If there be Symptoms that it will resolve (which happens from the first moment of its invading, to about the fourteenth day) which are the abating of the common Symptoms of the Disease, and the color of the Urine, there may be hopes of cure. But if a burning and continual Feaver accompany it, (shewing the Bowel much inflamed ;) Or, If a Hiccough follows it (shewing the Inflammation at highest, and by communion of the Nerves, the Mouth of the Sto-

mach to be drawn into consent ;) Or, if shaking, assault the Sick, without order or reason, and attended with an exacerbation of heat ; Or, if a Looseness follow, proceeding from a weakness of the faculty : Or, if Pains and the Feaver with other Symptoms grow strong, yet chiefly by night wherein it comes to Suppuration : The hopes of Cure in all these cases will be but small. From an Aposteme comes a so-did Ulcer, wherein there is loss of the solid substance of the Liver, which not being to be repaired, because it is a Spermatical part, renders the Disease in this case absolutely incurable ; so also if it tends to induration, known by this, that after forty days, the Feaver and pain doe falsely vanish without sensible evacuation, with a hurt of the Appetite, and a Consumption of the Body, the tumor and hardness remaining. But indeed all Inflammations of the Liver are very dangerous, and for the most part Mortal ; if they kill not presently, they end in a Dropsy, Atrophy, or Marasmus. An Inflammation in the Gibbous or buncy part, is more dangerous, than that which is in the hollow part, because nearer the Heart, Midriff, and Vena cava.

XL. Scirrhus of the Liver. Galen ad Glaucum lib. 2. cap. 4. saith, An Insensible Scirrhus is incurable, but that which is a little sensible is curable, though with much difficulty. A Scirrhus which followeth the Jaundice, or causes the same is dangerous, whence Hippocrates sect. 6. Aph. 42. saith, That if the Liver grow hard (viz.

has a Scirrhus) in them who have the Jaundice, it is an evil Sign. An Inveterate Scirrhus degenerates into an incurable Dropsy, of which some dye sooner than others; if there be a Loolness of the Belly concomitant, it is of long continuance. Yet I once cured an apparent Scirrhus of the Liver of more than two years standing, after that many eminent Physicians had given the Sick over as incurable, notwithstanding all that Galen has said, Cap. 5. of the Book *aforecited*.

XLII. Ulcers of the Liver. The hopes of cure in this Disease is but small, yet it ought not to be neglected, because the Ulcers grow foul by a perpetual filth, being continually washt with the Nutriment. That in the Superfices is least dangerous, that in the solid Substance is Mortal, because a Spermatical part cannot be regenerated. That which comes from an Avoftem, following an Inflammation is dangerous, and if it pierce deep in the solid substance, Mortal, That which comes from Corrosion, ends in a Hectick, or Marasmus.

XLII. Atonia, Weakness of the Liver. This is not in it self dangerous, but is oftentimes of long continuance, causing at length many evil Diseases; as the Scurvy, Cachexy, Dropsy, Green-sickness, Scrophula, and such like. The Prognosticks are taken from the Causes; a cold and moist distemper most commonly produces a weakness of the Liver, from whence cold and moist Diseases proceed: if a hot and dry cause be preceeding, a Hectick follows, or an Atrophia.

XLIII. The Dropsy Ascites. If the Sick be strong and young: Or, one who is able to endure hunger, thirst, watchings, and hard labour: Or, if more moisture is voided by Urine than is taken in: Or, if the Water in the Veins flows to the Belly, and is cast forth by Stool, the Bowels being unhurt, there is then great hopes of Cure. But the Disease is desperate if not incurable, when a Cough comes upon it, for it shews the water to be so increased as to possess the rough Artery: Or, if the water breaks forth into the Caul, and that be corrupted: Or, if it arises from a Colliquation, because all the strength is dissolved and the Body Languishes: Or, if it comes from an acute Disease, because the Bowels contract a cold and hectick Disease from the wasting of the Radical Moisture: Or, if being eased by Medicine, there be a Relapse again, shewing the Bowels are putrefied, and possess either with a Scirrhus, Consumption or Hectick; Or, if it happens to such as are Splenetick, after a long Dysentery, shewing the extinction of natural heat in the Guts and Bowels: Or, if Avoftems, Spots, or Blisters break forth in the Thighs and Leggs, in all which cases the dissolution of the Sick is at hand, Death stands at the Door.

XLIV. The Dropsy Tympanites. If it happens in a Melancholick Body, it is Mortal, and Medicines are given in Vain. This is that which by some is called the Dry Dropsy, because it comes prin-

Principally from flatulency and ventosity: yet it is for the most part joyned with water. It is in all persons difficult to cure, but it is easier done in young people than in old: the longer continuance it is of, the more desperate. *The danger and difficulty may be estimated from the Causes; yet in general, every Dropsy is dangerous, and hard to be cured. If it comes upon an acute disease, it is evil: so also (according to the Judgment of Hippocrates in Coacis) to piss by Drops.*

XLV. *The Dropsy Anasarca, Or water between the Skin and flesh: wherein not only the Hands, Arms, Brest, Face, Thighs, Leggs, and Feet swell, but the whole Body: wherever you thrust your Finger into it, it will pit, and leave an Impression. The Anasarca is the least dangerous of all Dropsies: if the Water which is in the Veins flow into the Belly, viz. the Guts, the Disease is cured: Hippocrates sect. 6. Aph. 14. That is, if a strong Diarrhœa, or Loosness come at the beginning while the strength is firm. But if it be discharged into the Omentum, viz. the Cavity of the Abdomen, so that the Belly is filled with water, the sick dies. Hipp. Sect. 7. Aph. 55.*

XLVI. *Inflammation of the Spleen. The Prognosticks are nearly the same with those of the Liver, but less dangerous, because the Liver is the Nobler part. If it kills not the Sick, it either ends in a Crisis: Or is dissolved: Or, else suppurated: Or, lastly it grows hard, and turns into a Scirrhus. A healthful Crisis is when the left Nostril*

bleeds (because the Spleen lyes on the left side,) Or, if there is a purging by Stool or Urine.

XLVII. *Scirrhus of the Spleen. The Scirrhus of the Spleen is easier to be Cured than that of the Liver, because being the less noble part, the stronger Medicines may be applied to it without danger. The Cure is more difficult, if that a Diarrhœa ensue: Or, a Lientery; Or water between the skin and flesh follow it.*

XLVIII. *Pain of the Spleen. It is without danger, unless it has been of long continuance: Or in ancient people: Or in a Woman whose Courses have been long stopt: Or is so extream as to cause an Inflammation. If it be by consent of other parts, it is yet more easily cured.*

XLIX. *The Black Jaundice. If it be by default of the Gall, or Bladder, it is the harder to cure, because there is then a greater corruption of the Choller, and most commonly a Yellow Jaundice went before it: If it be by default of the Spleen, the humor is the more stubborn, and there is fear of a Dropsy, to follow it, and in this case, pain, obstruction of the Spleen, or deep Melancholy preceeded it.*

L. *Obstruction of the Reins. A Simple obstruction of the Reins is easily cured: If it comes from slime or a viscous matter, it is not so difficult as if it be from Gravel or the Stone: If it be Recent it is to be cured with much ease: If it be inveterate, with a great deal of difficulty: If it be from Tumor, Phlegmon, or Scirrhus compressing them, the Prognosticks follow, the quality and*

danger of those Diseases. If there be a Delirium, Dotage, Frensy, or Convulsion, the danger of Death is not small.

LI. Nephritis, An Inflammation of the Reins. If there is a white, thin, or purulent water, without remission of the Fever and Symptom, and with a waiting on the Legs and Thighs; Or, if a delirium, Convulsion, or other great Symptoms follow it, it is for the most part deadly: if there is a cold Sweat, Death is at hand. If it suppurates, or Apostemates, and breaks, after which the matter takes its way through the Emulgent Veins to the Liver, and then to the Guts: Or, if it tends to Induration; it is very dangerous, and the Cure will be difficult: But if the Hemorrhoids follow upon it; Or, being suppurated, and the Aposteme broken, a white, smooth, and equal matter, not stinking be voided through the Urinary passages, there is good hopes of Cure.

LII. Ulcers of the Reins. All Inward Ulcers are said to be dangerous, but these most, because of a continual Flux of humors to these parts, which are for the most part Salt, sharp, and of an evil or malign Nature, disposed to make and nourish an Ulcer. If it is Recent, it is curable; if Inveterate, not. In young people they are curable, but with much difficulty: In old people they are Incurable. If they come from the Stone, they cannot be cured till the Stone is taken away. If the matter is stopped by an Obstruction in the Head of the Ureter, it by degrees either re-

dounds by the emulgents into the greater Veins, thereby defiling the blood and habit of the Body: Or, else is heaped up in the part, distending the Loyns, from which, the skin being opened, the matter will flow much and a long while. At length, the Ulcer causing pain, Watchings, and Wastings, brings the Body into a deep Consumption.

LIII. Inflammation of the Bladder. The judgments of an Inflammation of the Reins at Sect. 51. foregoing may be applied here. The Cure is difficult, because the affect is for the most part Mortal, about the seventh day, especially if a Fever come upon it, with Stoppage of the Urine and Stools. But if it be gentler and it Apostemates and breaks inwardly, whereby it is emptied by Urine, with a Sediment white and equal, it promises Health. Or, if an Erysipelas or Cholerick Tumor suddenly arises in the skin and plenty of water being made, the Inflammation is presently dissolved, and the Disease cured.

LIV. Ulcers of the Bladder. The Prognosticks are the same with an Ulcer of the Reins, which see, Sect. 52. foregoing. But this you have farther to note, that as all inward Ulcers are dangerous and difficult to cure; so there is but little hopes, and so much the less, because the Bladder, is Membranous: and because the Urine (which is Biting, and by its continual running down) hinders it consolidation. In a word, in Ulcer of the Bladder is very rarely cured.

LV. In

LV. Incontinency of Urine. In an acute Feaver it is very dangerous: for it comes either of a *Delirium*: Or a great hurt of all the Faculties, proceeding from the extinction of natural heat. In children its cured when they grow older, when the superfluous humidity is exhausted, and the loose parts more knit: But if they be not cured before twenty five years of Age: Or if it happens to old men, who have great moisture, and loss of natural heat, it is absolutely incurable.

LVI. Pissing Blood. If it be not suddenly cured but becomes inveterate, it brings a Consumption. If it be cast forth in abundance, and is stopt in the Bladder, it putrifies, and brings many evil Symptoms with it. If it be often pist forth, and largely, it brings either an *Airophia* or *Dropsy*. If it continues long, it may cause an Ulcer, in the part whence it flows.

LVII. Pissing Matter. If it proceeds of Blood turned to Corruption in the Bladder, it is the more easily cured: if it is by default of the *Ureters*, *Urinary passage*, *Spermatick Vessels*, or *Parastatae*, it is more difficult; If it be caused by an Ulcer inveterate, it is incurable.

LVIII. Pneumatocoele. A Windy Rupture. If it is in Children, or Recent, or proceeds not from any old Disease, it is the more easily Cured: but if it is in old people; Or if it is Inveterate; Or Hereditary from a Windy disposition, of the Parents: Or, the party was born with it, it will be difficult to Cure, if not absolutely incurable.

LIX. Hydrocele. A Watery Rupture. This Disease is of exceeding difficult cure, inso-much as very few that are affected herewith are made sound, especially if the Disease proves inveterate, or unless the help of Chirurgery be added. If it arises from water simply, it is easier cured than if with all the flesh grows to the Testicle. If it is accompanied with a Dropsy, the Prognosticks follow the exigency of that Disease. If it is in old and weak people it seldom or never admits of Cure.

LX. Sarcocoele, Hernia Carnosa, A fleshy Rupture. It is wonderful hard to Cure, and is very seldom done without manual operation. If it be Inveterate or of long continuance it is to be feared least it degenerates into a *Scirrhus* or *Cancer* according to the Constitution of the Body, and nature of the humor abounding. If it tends to a *Scirrhus*, there is neither pain nor heat: But if it be malignant or Cancerous, there is felt anguish, and pricking: A *Circocoele* is scarcely ever cured: nor can cutting be used well, without hurting the Stone: for the most part, those that are cut in this case, are gelded.

LXI. Diseases of the Yard. Warts and excrescencies are of easy cure, unless they degenerate into a *Cancerous* substance, then they are not only difficult, but dangerous to be meddled with, and the work must be done by Chirurgery. In Ulcers of the Yard, you must have recourse to the general Prognosticks of Ulcers

cers: If they be Simple and Recent, they are the more easily cured. If they be Inveterate, Callous, Sordid, Malign, or Virulent, proceeding from the French Pox, they are much the more difficult. If a Gangreen or Mortification follow, it must be cut off.

LXII. Impotency. If it proceeds from a Palsy or Convulsion; Or, happens in an Old man: Or, in one Consumptive, it is incurable. It is scarcely ever to be remedied, if it comes from the defect of Seed: and very difficult to be cured, when it proceeds from a defect of Vital Spirits: But if it comes only from the coldness or crudity of the Seed there is hopes.

LXIII. Priapismus, a Priapism: It is no ways dangerous, if it be suddenly remedied: if it continues long it is doubtful, and if restored may cause an Imbecility, or Impotency of the part: If no help be found in forty eight hours, it is said to kill the Patient; or at least to bring upon the sick some worse disease.

LXIV. Tentigo, The Extension of the Clitoris. It is never to be cured by Medicine, unless the Patient be very young, and the Disease Recent, in which cases it will be found difficult. Otherwise, it requires the help of Chirurgery, wherein the flesh is directed to be cut off either by Ligation, or Section, having a care of an Inflammation which may bring with it a much worse distemper.

LXV. Straightness or Obstruction of the Neck of the Womb. The Closure of the Inward Orifice of the Womb is incurable,

because no Instrument can be applied to open it. If the Closure be in the Orifice of the Pudentum or Privy, it is easily cured, being helped by a slight Section: but in the inward parts it is much harder. If the passage is stoppt with a Membrane, it is more easily cured: but if it be by a fleshy matter, as it sometimes chances after Ulcers, it is more difficult. If it be from matter stoppt there, or obstruction of the Courses, there is hopes according to the different Causes.

LXVI. Pustles of the Womb: Those which are Simple and Benign, are of easy cure, and sometimes vanish of themselves, unless the Woman be very debauched and Letcherous. The malignant and contagious, are very long of Cure, and commonly stubborn, not easily yielding to Medicines; if they degenerate, and become a running and Cankerous Sore or Ulcer, the cure will be very difficult.

LXVII. Condylomata, Swellings of the Wrinkles in the Neck of the Womb. If they be Simple without Inflammation the Cure is easier: yet all Diseases coming of viscous, adust humors and in a Melancholy habit, are not easily helped. If it be with Inflammation, the Cure will be with a great deal of trouble, and length of Time, unless the Inflammation can be dissolved first.

LXVIII. Hemorrhoids of the Womb. They are difficult to cure if they have been of long standing. They are not dangerous unless they ulcerate, or threaten a Gangreen, or turn Cancerous.

If they come from obstructions of the Terms, they are easily cured, if in the beginning: otherwise a Scirrhus or Cancer follows.

LXIX. *Ulcers of the Neck of the Womb.* The cure is hard to be performed, because they are in a place of exquisite sense, moist, and which hath the consent of many parts: yet they are more easily cured than Ulcers in the Womb it self, because Medicines may be applied to them immediately. If the woman begins to conceive, or has her monthly courses orderly and without pain, it is a token of recovery and perfect health.

LXX. *Distemper of the Womb.* A simple distemperature of the Womb is not hard to be cured, the which is sometimes performed without Medicine, only by temperance and a good Diet; nor is there any difficulty in the Compound, if the womb abounds not with many Excrements, or the party be not over-lacivious. But if it be accompanied with a Fever, or a Convulsion, or with Hysterick fits, the Cure will be troublesome.

LXXI. *Obstruction of the Womb.* If External causes bring it, it is easily cured, if from Internal, it is more difficult. If it proceeds from flesh, or a Membrane growing on the mouths of the Vessels; or from a growing together of the mouths of the Veins, after a Violent drawing forth of the Secundine, it is said to be scarcely curable, or not without very great difficulty. If it be by compression, either by a Tumor or Scirrhus, whither within or

without the womb, the Cure is almost to be despair'd of.

LXXII. *Inflation of the Womb.* If it be in the Coats of the womb, it is much more difficult to cure than if it is in the Cavity thereof. If it be accompanied with Hysterick fits the Cure is dubious. If it happens to a woman with child, viz. an Inflation in the Tunicle of the Womb, it threatens Abortion, or difficult delivery.

LXXIII. *Inflammation of the Womb.* The cure is very difficult if the whole Womb be Inflamed or Apostemated, for a putrid and sordid Ulcer, thence arising, does at length kill the Patient with a slow Fever. But, if the Inflammation turn to a Gangreen: Or, in a woman with Child, degenerates into an Erysipelas, the exceeding heat not only suffocates the Infant, from whence follows Abortion, but also kills the Mother; in both these cases the affect is mortal, and this Disease is for the most part deadly. But if it only possesses a part of the Womb, there is hopes, so also, if it easily and speedily suppurates. If it degenerates into a Scirrhus, the Disease becomes inveterate, and often brings a Dropsy. Lastly, Ravings, turning of the Womb, Hiccoughs, coldness of the hands and feet, and much sweating, seizing on the sick in this Disease, forebears death to be near, or at hand.

LXXIV. *Scirrhus of the Womb.* It is difficult to Cure, as well because things a long time dried, cannot be easily mollified, as because the native heat is exhausted in those parts which are affected

fectèd with a Scirrhus : and also because that while the humour is mollesying by over hot and moist Medicines, it may easily degenerate into Cancer by putrefaction. That in the neck of the Womb, is easier cured than that in the Substance of the Womb. A great and incurable Scirrhus or Stoney-swelling, does at length bring with it the Dropsy.

LXXV. Cancer of the Womb. The Judgment of a Cancer of the Womb are, that it is incurable, whether it be ulcerated or not ulcerated: which as it is generally true of all cancers, even in these which are in the outward parts of the body, so much more in a Cancer of the Womb, by reason it is a perpetual common shore of Excrements, which are cast into that part.

LXXVI. Ulcers of the Womb. Hippocrates saith, That no Ulcer of the Womb ought to be slighted, because it is a part exceeding sensible, and to which a flood of Excrements perpetually flow. If it proves Cancerous Phagedenick or a Wolf (such as poor, ignorant people tell strange tales about, as how it eates flesh, &c. Or, if it be hollow or fistulous, it is for the most part incurable, and vexes the sick all her life long. If it proves a Morrification, Gangreen, or Sphacelous, it is very grievous and dangerous. and for the most part deadly. Yet it has been observed by many Authors, especially by *Wierus* and *Schenkius*, that the Womb being putrefied and gangreenated, has either fallen away of it self, or been cut out, the womans life

being saved; A great number of Examples whereof is collected by *Schenkius* in his *Observations*, lib. 4. The beginning of a Gangreen is known by an unusual heat in the part, with horror, trembling, languishing, and fainting away or swooning, seizing the Patient, with a quick beating Pulse. It most commonly happens to the neck of the womb, so that the affect is to be perceived by the Eye, being soft, lead or black colored, and carrion-like, which being prick'd or cut is never felt, but sends forth a stinking and Carrion-like scent. It is caused from an Inflammation, Apostem, Ulcer or Cancer, ill cured, the natural and vital heat being choaked and extinguished.

LXXVII. Dropsy of the Womb. If it proceeds of an humor not putrefied, the cure will be long, yet may be performed in process of time; but sometimes the sick recovers by the waters flowing out of the Womb of its own accord. If the disease be in the cavity thereof, it will be easier cured than if it be shut up within little skins or bladders. If the humour be sharp, malignant or putrid, (known by grievous and vehement symptoms following it) it is dangerous, and for the most part mortal. If it depends upon a particular Disease of the Womb, it shews the Abolition of the natural functions of that part, whence comes an universal Dropsy of the whole body. But if the Womb suffers by consent of other parts, as Stomach, Liver, or Spleen, the danger will be greater, and ruine is thereby threatned to the whole body.

LXXXII.

LXXVIII. *Falling down of the Womb.* The Cure will be difficult if it be great, or if it happens to them of full Age; Or if a Fever, Convulsion, or other Symptoms goe along with it. In those Women that lye in, it is deadly, who sometimes by alteration of the Ambient Air, or violent repelling of it, have it Corrupted and taken with a Gangreen. However this Disease of it self in other Women is not dangerous, but rather unseemly and troublesome. It is easier cured being Recent than when it is inveterate, if it be by a reason of a Rupture of the Ligaments, it is incurable.

LXXIX. *Weakness of the Womb.* If it proceeds from a Distemper of the Womb, the Prognosticks follow the same which see Sect. 70. foregoing: If it comes from an occult quality, there can no true Judgment be made, only if it be of long continuance, there will be but little hopes of restoring it to its right state, and if it be in Age, it will be incurable: So also, if it proceeds from a neer abolition of the native heat.

LXXX. *Pain of the Womb.* You must educe your Judgment from the Causes. That from Distention is easier cured than that from Corrosion: because it is easier to open the passages, to evacuate the matter causing the distention; than to Cure the Ulcer, which for the most part is difficult, more especially if it proceeds from a Venerial, malign, or Cancerous matter.

LXXXI. *Flux of the Whites.*

It is a Disease that seldom kills the Patient, but is commonly tedious, of a long continuance, and very difficult to cure, because the humors having once taken their course that way, are hard to be repelled, the Womb being as it were the Sink of the whole Body: and old Women it commonly follows them to their Grave. The older the Disease is, the more difficult it is to cure; and if the matter is blewish, bloody, or stinking, it is worse than when it is white or pale and scentless. If it continues long and vehement, it causes Weakness, Barrenness, falling down of the Womb, Exulcerations, Cachexia, Swoonings, Convulsions, Melancholy, Dropsy, Atrophia or Consumption, and many other evils.

LXXXII. *Madness of the Womb.* If the Cure be sought or the means be used in time, it is curable; but if it becomes inveterate, and takes firm rooting, it degenerates into a true and perfect madness. When the distances between the Paroxisms begin to grow greater and greater; Or, when the sick being emaciated grows fat again; Or, if the Venerial matters, being discoursed of, ceases to disturb them, the hopes of recovery are then great.

LXXXIII. *Barrenness.* The Prognosticks follow the greatness of the Causes. Youth before Ripeness can't possibly conceive: and in elderly persons there is a total desperation, their Courses having left them, more especially, if they never had any Children at all, for in such the womb is as it were contracted and withered.

thered. If it proceeds from too much fatness, or some recent distemper of the Womb, there may be hopes of procuring leanness; and correcting the Distemper. If it be caused by other diseases, as Tumor, Apostem, Ulcer, Obstruction, Whites, want of Courses, falling out of the Womb, Consumption, Mange, French Pox, and the like; judge the Cure to be hard or easy, as the Disease is from whence it proceeds. If it is from evil Shape in the Members, or want of Proportion, or in such as have distorted thighs, or Crupper bone depressed, it is incurable.

LXXXIV. *Mola*, a false or imperfect Conception. It is a Tedi-ous thing, and in many persons of a long continuance. I knew a certain woman which went 3 years with a Mola in her Womb, and at last was safely delivered. If they grow very great, or stick to any part, as in some I have known it do: Or, if in coming forth, a great Hemorrhage follows it, is dangerous.

LXXXV. *Abortion*, or *Miscarriage* in Child-bearing. If the Womb is very loose and moist, the miscarriage is usually without danger, especially in the first months; but it is more dangerous in the sixth, seventh, and eighth months, because the child being greater is excluded with more Pain. Abortion is more dangerous than a due and timely child-bearing: for as in ripe fruit, the stalks are loosened, and the fruit falls of it self; so in a natural birth, the Vessels and Ligaments which ty the child to the Womb, are loosened and untied of their

own accord, which in Abortion are violently broken asunder. If the rending and tearings be very great in miscarriage, the woman often times becomes barren. If it be accompanied with much bleeding, fainting, raving, and Convulsions, it is commonly mortal; so also if an Inflammation follows it, because the blood putrifies therein, and regurgitates to the upper parts, causing burning Feavers, fainting, sickness at heart, &c. Abortion, in the first Child, and in fat women, is more dangerous than in others, because the Passages are streighter: so also in Women very lean, because of their weakness.

LXXXVI. *Hard labor* in Child-bearing. It is in it self so dangerous, that sometimes the Mother, sometimes the Child, and sometimes both do loose their lives: and it is generally mortal, if sleepy diseases and Convulsions do befall the woman in her travel. But Hippocrates saith, That sneezing in this case is good. The Child can scarcely live, if the woman has been four dayes in Labour.

LXXXVII. *Dead child*. If the Child is dead in the Womb, it is very dangerous, and if not timely expelled it causes feavers, fainting, swoonings, dead sleeps, convulsions and Death it self. But by the relations and Collections of Schenkus, a dead Child may be kept a long time in the Womb; and, Sennertus, out of him, relates the voiding of Bones of Children dead and putrefied in the womb by the Cunnus, Anus, and by a swelling, that broke in their Belly.

LXXXVIII. *Symptoms* in Child-bearing.

bearing. 1. *An untimely flux of Blood just before the Birth*, is very dangerous, more especially if it be with weakness of strength and swoonings. 2. *Retention of the Afterbirth* is exceeding dangerous, especially if it continues some dayes in the Womb whereby it becomes putrefied, for from thence arises acute Feavers, Vomiting, fainting, difficulty of breathing, violent Sweatings, Coldness of the extreame parts, fits of the Mother, Falling sickness, Convulsion & Death it self.

3. *Immoderate Flux of the Loches* are dangerous, because as the blood is the vehiculum of Life, so it also immediately follows the Travel, by which the sick is beforehand exceedingly weakned, but the danger is more or less according as the Quantity of the blood, and Symptoms attending the same, are greater or lesser. Hippocrates, Sect. 5. Aph. 55. saith, *That in this Case, Convulsion and Swooning fits are evil signs.*

4. *Suppression of Child-bed purgations*, if it be Total shews infinite dangers and evils to arise thereby, as acute Feavers, Frensy, Madness, Melancholy, Quinsies, Pleurifies, Inflammations of the Lungs, and other Tumors for the most part malignant: and sometimes it ends in Death.

5. *Gripings, Chollick, or After-pains in Child bearing*, commonly goe away of themselves in two or three days time: but if they be sharp and of longer continuance, scarcely to be cur'd without Medicine, they are not usually dangerous, though very troublesome.

6. *Feavers and other acute Dis-*

seases, are more dangerous in this case than if they were Simple; and here the Prognosticks follow the nature of those Diseases, but if they continue long without relief they surely bring Death: because by reason of the late child-bearing, the Sick is more weakned and dejected, and so not able to undergo their Violence and Ardors.

LXXXIX. *Omphalocele, Exomphalos, A Rupture of the Navel.*

1. If it be recent and in a young creature, it is easier cured than if it be inveterate, and in one of elder years. 2. *Hydromphalos* sometimes breaks forth of it self, after which the Water being evacuated, it has with a little difficulty been cured. 3. *Anemomphalos*, is difficultly cured, if its cause lyes in the Bowels which nourishes it. 4. *Sarcomphalos*, is scarcely to be cured without Chyrurgery; If it degenerates into Cancer, it is incurable.

XC. *Sciatica, The Hip Gout.* It is to be cured with very great difficulty, as well by reason of deepness and largeness of the place, as for the plenty of matter that is wont to be collected there. If it continues long it puts the Hip out of Joynt; for the Serous pirituous humor does insinuate it self into the hollow of the Joynt, which being very large, and it staying long there, the thiner part is dissolved, leaving the thicker like a Gelly behind, which Gelly softens and loosens the bands which knit together the Bones belonging unto that Joynt, whence the Hip-Bone falls forth, so that limping

or halting follows: and a Consumption of the Thigh, because the Bone (slipt out of its place) does press upon the Muscles, Veins and Arteries, thereby hindering the Blood and Spirits from coming to and nourishing those parts. *This is the Opinion*

of Hippocrates, Sect. 6. Aphor. 59, and 60. Such (saith he) as being troubled with long pains of the Sciatika, having their hip disjoynted, and a Gelly bred in the part, have a Consumption of their Thigh, and they halt, except they be burnt. The doing of which Sculterus has taught.

CHAP. XLII.

Of Diseases which affect the whole Body.

I. **C**hlrosis the Green-Sickness sometimes continues a long time, but is seldom dangerous, by its continuance it breeds Cachexia's, Dropsies, great Obstructions, Consumptions and Feavers, ending in Death.

If it be suffered to take Root, whereby the nourishment is hindered, it breeds a Scirrhus, and other Tumors, with other great Diseases of the natural parts. If it comes from obstruction of the Veins of the Womb in young Women, it is generally cured by Marriage. If the Disease has been of long continuance, the Woman is either Barren, or breeds weak and diseased Children. If the Terms keep their ordinary Course, with their due Quantity and Quality, or can be reduced thereto, there is great hopes.

II. Cachexia, If it continues

long, it degenerates into Hydrops.

If a Diarrhœa or Flux of the Belly follow it, it is cured: If it follows a Dysenteria or Lienteria, it is dangerous. If it comes from an inveterate Disease, or a Scirrhus, it is incurable.

III. Scorbutus, The Scurvy, proceeding from Melancholy is hard to cure; sometimes it bringeth a Dropsie, Consumption or Rheumatism; and sometimes acute Diseases, as Apoplexies, Syncopes, Convulsions, which end in sudden Death.

This Disease has sometimes certain kind of Paroxisms, in which the Pulse is exceeding deceitful, and the Diseased seems to be at Deaths door, yet after the fit, they will get up, be cheerful and pleasant as formerly. Sometimes those who have seemed to be desperate have been cured, and oftener in this Disease

case than in many others: and some Consumptive by long pain and a bloody flux, have been restored to perfect health. Again on the contrary, some who have seemed to be but very slightly infected, their Disease has been so stubborn and rebellious as to resist all remedies; and at last in spite of what the Physician could do, he has been forced to give them over as incurable: but this was doubtless from the occult and secret lurking of the Melancholy humor, which deceiving the Physician, has made him erre in his Prognosticks: hence it appears, that the Judgments of this Disease, are very dubious, various, and uncertain, unless the Physician be very prudent, and sharp in his Intellect, to search out the depth of the hidden cause, which oftentimes carries with it a malign Quality, under no present evil appearance, but when once the humors come to a fermentation, it discovers it self with a Vengeance.

IV. Hydrops, the Dropfie (of every kind) is hard to be cured, anasarca is least dangerous: if a Dropfie come upon an acute Disease, it is dangerous; if the Liver be full of water and discharge it self into the Omentum, Death will cure the Sick; if in the beginning of a Dropfie there be a Flux of the Belly, with concoction, the Disease vanishes: if the sick make much Urine, and more than he drinks, this is a healthful sign: Apostumes or Spots in the Legs, or a Tympany, in a Melancholy per-
have on, with stopping of Urine, or a
s Dis- elapse, all presage the Disease
sease will end in Death.

This Disease if it be Recent, and in a young person is not difficult to cure: in persons aged, it is very doubtful, if not desperate, and indeed, such as are much in years; seldom find a cure for it. Ascites and Tympanites are sometimes one more dangerous than another, according to their causes. If Ascites comes from a Scirrhus of the Liver, or Ulcer of some internal part, it is more dangerous than a Tympanites: but if it comes from Obstructions, or drinking too much water, it is less dangerous. It is more easily cured in Servants than in Freemen; in Country men than in Citizens, because the one will better be commanded and observe rules than the other: as also because strong exercise and hard labor much conduces to the Cure. A Dropfy from hardness of the Spleen, is less dangerous than that from the hardness of the Liver, because the Spleen is the less noble part. If a Flux comes upon an Old Dropfy, it is not so safe, because there is commonly some fault in the Bowels, as a Scirrhus or Corruption of Substance, which begets new matter; these are commonly cured by Death. Hence Hippocrates saith, That they who are to be cured of the Dropfy, must be Eusplanchnous, that is, have sound Bowels, free from the Diseases above named. Otherwise, as Galen shews, if a Flux of the Belly happens with a Scirrhus of the Liver, the Sick dyes presently.

V. Exanthemata, the Small Pox, is an acute Disease (whose judgments agree with Chap. 29. 30, 31; 34.) if they soon come.

Y 2 out

out, and easily ripen, or Symptoms be not great, breathing free, and appear white and round, there is no danger: but a great Feaver, difficult Breathing, great Thirst, Looſeness, Bloody Flux, Bleeding at Nose or otherwise, are signs of Death; the same, if they be green, blewish or black, or go in again: black or blew spots, with black or livid Urine, is dangerous.

If in coming out they be hard or touch one another; Or if they come out slowly the Feaver abates not after their breaking forth; Or if the Patient breaths not freely, but faints away, and other evil Symptoms be present, the Judgment will be very doubtful. See Chap. 43. Sect. 17. following.

VI. *Lues Venerea*, accompanied with *Asthma*, or an Ulcer of the Lungs, or loss of Voice, or loss of the Bones of the Nose, with a slow Feaver, the Disease being communicated to the Brain it self or its Membranes, or with a Vertigo, or Epilepsy, or with great pain and noise in the Ears; or with an Atrophy, Consumption, Hætick or putrid Feaver: or with a Dropsy, or a tedious Catarrh, causing a Phthisick: Or with a Solution of unity in the Vessels, being eaten in two by the acrimony of the humors, whence follows great Vomiting of Blood, Spitting of Blood, a violent Bloody Flux or Flux of the Terms; in all these precited cases it is incurable.

The stubbornness of this Disease is such, that though it seems to be wholly rooted out, yet it oftentimes

grows fresh again, after many years: And as it is a malignant and contagious Disease, so it may infect all the humors of the Body, withall the Similiar parts; from whence it becomes very difficult to be cured. If it be Recent, it is more easily cured than when inveterate, for in a new Pox, those parts are only infected by which it is propagated, which are chiefly the Privities: but in an old Pox, the malign quality is imprinted on the Liver, from whence it is communicated to the Blood, and from the Blood to all the Similiar parts. If it seize on those which have been formerly cured, the Cure will be more difficult. If it fall upon a hot and dry distemper of the Liver, and in a person of a hot and dry body, the cure will be the more hard to accomplish, because either things proper cannot be administred, Or, if they be, some other mischief is brought upon the Body. So also, if it falls upon a hot and dry time of the Year, because the strength is then most of all exhausted; Or, if the sick is very weak, so that they cannot undergo strong Medicines; Or, if a Feaver, Consumption, or other grievous Symptom or Disease be joyned with it; Or, if there appear in the Joints, Callous, Scirrhus, or hard Tumors, and those commonly called Gummosities; for such Tumors never appear unless the cure be inveterate, has taken deep root, and is even fixt in the Bones; Or, if Suboor in the Groin, hard, and not easily suppurated; Or, if the sometimes break forth, and then suddenly vanish again, for that signifies the turning the venom to some more noble place; Or if the

be a Roughness of the Jaws, with Hoarseness, or an obscure Voice, which shew the Disease to be Ancient; Or, if Ulcers be in the Anus, or in the Joynts, or in the Mouth and Jaws; Or if there be bunchings out, especially very broad; Or, if the color of the skin be depraved, and the hair fall; Or, if there be intollerable pains in the Head, or nocturnal pains in the Shin bones, or other parts; Or, if there is a virulent and inveterate Running of the Reins, &c. in all these cases it is very hard and difficult to cure. That is easier to be cured which is contracted by coition, than that which the Infant has suckt in with the Milk from a Pocky Nurse, because the virulency goes into the Stomach with the Milk, which infects the Liver and Blood: but if it be Hereditary, communicated from infected Parents with the Seed and Blood, it is hardest of all to Cure. If Buboës appearing in people strong, and such who have a good Liver, be easily suppurated, they shew a more gentle Disease, and if they be kept open a long while, they shew cure the Disease, and bring perfect Health. The Liver only affected, the Disease is the more easily cured; but if withal the Spleen, Reins, Womb and Joynts be infected, the Cure is more difficult; And, if the Brain or Lungs be toucht or hurt, the Patient is most dangerous, for Medicines do not easily penetrate thither.

VII. Rheumatismus, Distillation of Rheum to the Joynts, or running Gout, in old Age, or in Asthma, is incurable.

But this Disease is seldom ex re-

ver Mortal, though very troublesome to the Sick; It continues at a time (if it be without a Feaver) sometimes two or three Months, and in some persons six Months at a time: if it be not well cured it may continue for a Year or Years. If it comes with a Feaver, it is commonly shorter, but it afflicts the Sick with more cruel pains and torments, and then it finishes its course in about twenty or forty days, or at least in a hopeful way. Sweatings in the declination of the Disease are critical and good, so also much and Thick Urine. If it comes upon the Neck of other Diseases, as an Apoplexy, Convulsion, or Epilepsy, the case is yet the less dangerous, for the Morbifick matter, is translated from the Internal parts of the Body, to the External.

VIII. Arthritis, the Gout if it be knotted in the Joynts, or in extreme Age, is said to be incurable.

This is a Disease in which there is more of trouble and pain, than in any thing of eminent danger; It is generally chronick and of long continuance; so that it accompanies many men even to their Graves. But Physicians say, It causes the Patient to live long, because at set times it casts out to the Joynts vitious humours, which might cause other Diseases, thereby freeing the more noble parts of the Body. It is difficult to cure by reason that the morbidick matter being dispersed through the Ligaments, Membranes and Nerves is not easy to be dissolved, because of thickness and coldness of those parts. It is said to be Deadly, if it be joynted.

ed with any Mortal Disease, or suddenly rushes out of the Joints into the Stomach. If the Joint comes to be luxated, the Disease is incurable; for though it may be reduced, yet the Ligaments remain relaxt: But if in the Luxation, the Joint be filled with a Tophous, Stoney, Tartarous, or Glewy matter, that must be removed, before the Joint can be reduced. It is also said to be incurable if it be Hereditary. Avicen saith, That if the Veins of Gouty persons swell with black Blood, that the Gout leaves them. Hippocrates in his Predictions lib. 2. says, That all that are Aged, or have Stoney knots

about their Joints, or live miserably being Costive, cannot be cured by the Art of Man, so far as he knew; but those that are young, without stoney knots, and live temperately, being inclined to Labour, and having a Belly well inclined to Stool, may by a skilful Physician be cured. It also often chanceth, if when Nature in Age, can no longer expel the mortific matter, that deadly Diseases do thereupon arise, as very acute Feavers, Inflammations of the Bowels, Apoplexies, Convulsions, Frenzy, difficulty of Breathing, Pantings of the Heart, and such like.

CHAP. XLIII. Of FEVERS.

I. **E**phemera generally ends in one day.

Though this Feaver is commonly terminated in twenty four hours space with a gentle Sweat, yet it sometimes reaches to the third day, which if it passes, it degenerates into a simple Synochus, in a Youthfull and full Body; Or into a putrid, the fourth or fifth day, in a body Cacochemical; Or into an Hætick, in a hot, dry and thin Body: the cure is easy, if it degenerates not.

II. *Synochus non putrida*, lasteth to the fourth or seventh day, at what time it is terminated by

Bleeding or Sweating, if it ends not then, it becomes putrid,

It is not very hard to cure, because it seizes for the most part strong Bodies, or temperate ones; or such as are hot or moist, of middle age, of a fleshy, well set, and lusty constitution; if it degenerates it is more difficult. Riverius reckons three differences in this Feaver; 1. *Epacmastica*, or that which continually increaseth. 2. *Paracmastica*, or that which continually decreaseth. 3. *Acmaistica*, *Homotonos*, or that which keep one and the same Course.

III. *Synochus putrida*, *Synochus*

ardens, a Burning or putrid Fever, with loofness or vomiting choleric, is good.

It is terminated by sundry Excretions, especially when the Sick happens to shake upon a Critical day, the signs of coction appearing; and that not by reason of the shaking, but because of the excretion, whose fore-runner is the shaking fit. But seeing it is an acute Fever is not without danger, unless the signs of concoction do appear; which if they manifest themselves after the seventh day, the Disease may reach to the eleventh or fourteenth day. If no signs of concoction appear, and the sick has a round swollen Face like a Globe, it foreshews the Disease to be long. By how much the Urine is redder at the beginning, (other signs corresponding,) by so much the safer it is, and shews the Disease will soon end, if there be also signs of Concoction; but with signs of Crudity, it threatens Death. White Urine is the worst of all, and is commonly Mortal.

This Synochus Putrida, or Synochus Liosa is distinguished with no fits or Exacerbations, but its whole time is taken up as it were with one fit, which reaches from the beginning to the end of the Disease. Riverius makes these three differences in it. 1. E-pacmaistica, when more putrefies than is dissipated, which is the most dangerous of all, having a long augmentation. 2. Paracmaistica, when less putrefies than is dissipated, this is least dangerous, but has a long declination. 3. Acmaistica or Homotonos, when in the whole course, the putrefaction is one and

the same, this is less dangerous than the first, but more dangerous than the second, and has a brief beginning and augmentation, but a long state. This Synochus is called Pericaes puretos, the Burning Fever, from the excess of Burning: Pur, fire, from its great heat: Asfodes, because it makes the Sick restless: Taraxodes, because it vexes the Sick with imaginary apparitions.

IV. Febris continua quotidiana, a continual quotidian Fever: with a Pleurisie, Quinsie, Ulcer or Inflammation of the Lungs, is very dangerous, if not mortal.

A continual Quotidian is wont to be long, by reason of the thickness and contumacy of the humor; but if various evacuations happen in the course thereof, it terminates the sooner. The danger thereof is to be conceived, by comparing the vehemency of the Symptoms with the Patients strength: If it degenerates into a Cachexy or Dropsy, by reason of some Obstruction of the Liver and Spleen; the Disease will be very long.

V. Causos, Continuus, Febris continua Tertiana, Febris Ardens continua, a Continual Tertian, or a Burning Fever, is dangerous: if signs of Concoction appear about the fourth day, the Disease ends about the seventh: red Urine with signs of Concoction is healthful, but with signs of Crudity, mortal; white Urines or healthful Urines, are dangerous.

This is the second kind of the Exquisite Causos or Febris Ardens, the Burning Fever, which is perpetually accompanied with

these two Symptoms, viz. an ardent or violent Burning heat, and an unquenchable Thirst, though the Sick drinks never so much. The first kind of the Exquisite *Causos* was that at Sect. 3. called *Synochus ardens*; this is *Synochus Ardens Periodica*, containing in its self (though continual) divers fits or accessions. These *Choleric Feavers*, as they are acute are also very dangerous, and that more or less, according to the vehemency of the Symptoms, and strength of the Patient. So much as the heat is increased above the natural Temper, so much the greater is the danger. It is commonly finished in the compass of seven or fourteen exasperations. It is not mortal, unless either some remarkable error be committed; Or some malignity attend it; Or that it happens to old people, and in the Winter time. The Violence of the Symptoms is considered in the Actions Natural, Vital and Animal; in the Excrements; in Qualities changed, and in other proper adjuncts; all which are to be compared to the strength of the Sick, which if he be vigorous, there is good hopes, otherwise Death is to be feared.

VI. *Febris continua Quartana*, A continual Quartan, This is a Disease rarely to be seen: *Riccius* says, That an intermittent Feaver or Ague sometimes degenerates thereunto, and then for the most part it is deadly. But more commonly this Feaver degenerates into an Intermittent. However it is very difficult to cure, both because it lasts generally to the fortieth day and farther,

unless perchance it be a Summer Quartan; as also because that humor is hard to putrefy, it proceeding from some great Cause.

VII. *Quotidiana intermittens*, a Quotidian Ague is dangerous, because it generally continues long, and at last oftentimes degenerates into a *Cachexia*, Drop-*sy* or *Lethargy*.

The Cure is very tedious, as well because it lasts forty days, at least, yea three months, and sometimes longer; as also because hurting the Stomach and Liver very much, it casts the Sick into a *Cachexy*. *Hippocrates* saith, That that which comes in the day time is more dangerous than that which comes in the Night: the former he calls a diurnal, the latter a nocturnal Ague.

VIII. *Tertiana intermittens*, a Tertian Ague, if exquisite seldom lasteth above seven Fits, and without danger, unless malignity be joyned with it; breaking out, and a looseness is very healthful.

This Ague is ended either by Sweat, if the humor be cast back into the Veins that are in the Surface of the Body; Or by Vomit and Stool, if to the Stomach and entrails; Or by none of these, if a great part consists in the *Meseraick Veins*, wherein the Sick feels a pressure pain, and Inflammation about the Midriff. *Hippocrates* saith Sect. 4. Aph. 59. An Exquisite Tertian Ague lasts but for seven fits at most: and in Aph. 43. of the same, that all Intermittent Feavers are void of danger. But this is to be understood of such Tertians as are void of

malignity; for there are malign and pestilential Tertians, which though they have evident Intermissions, yet do often kill the Patient: Besides, many accidents may fall in upon a Tertian, as a Surfeit, violent Colds, &c.) which may breed danger, though the Ague may have none of it self. Scabs and breaking out in the Lips in a Tertian are Critical, and signify the Ague is going away. So also a Loosness, the matter being digested ends the Disease; and this is the most excellent Critical sign, without which there is commonly a Relapse.

IX. *Quartana intermittens*, a Quartan Ague, of all is of longest continuance, enduring sometimes half a year, a year or two, or longer: black Urine if Critical is good: it sometimes degenerates into a Dropsy: if it degenerates into a continual Quartan, or falls to one above sixty years of Age, it is mortal.

This Ague many times lasts for some years, if it first happen in the fall of the Leaf. The Cure of it is difficult in all Cases, yet more difficult if it arises from black Choler. So also if it be accompanied with some greivous affection of some of the Bowels. But if it be a Legitimate Quartan, and unattended with any Disease of any Bowel: Or happens in the Summer, and in young people, the Cure will be the easier. An Exquisite Quartan is more tedious than a Spurious; but the Spurious is the more dangerous. The Unseasonable use of sharp and vehement purges causes a simple Quartan often to degenerate into a Double, Triple, and Continual Quartan, which for the most part are Mortal. Hippocrates, Sect. 5.

Aph. 73. saith, That those who have Quartan Agues are not much troubled with Convulsions; And if a Quartan follows upon Convulsions, they are freed there-from: because the heat of the Ague digests and attenuates the thick matter causing the Convulsion. Bleeding at Nose in a Quartan is a bad Sign, for it is Symptomatical, and if it continues will breed a Dropsy: But a Bloody flux coming upon a Quartan, according to the opinion of Hippocrates is healthful.

X. *A Compound Quotidian Ague*. It is commonly long and tedious; unless there be some eminent Critical evacuation; And as the Causes are reduplicate, so do they Prognosticate more danger than in a Simple: after a long continuance, it commonly degenerates into some other chronick and tedious Disease, and a Dropsy in particular may be feared: The Durance hereof you may judge by the Signs of Crudity, or Concoction; and also by nature's evacuation, which strives to cast forth the Morbifick matter by Vomit, Stool, Sweat, and Urine; for these evacuations, shew a sudden termination of the Disease: if there be no evacuation, it will certainly be the longer.

XI. *A Compound Tertian*. I. A Semi Tertian both Exquisite and Spurious, (for they differ chiefly in degree) are both dangerous Feavers, in which the Stomach and Nervous parts are very much affected: they are (but especially the Exquisite,) attended with dryness of the Tongue; Thirst, Swooning, Watching,

ching, and sometimes with Raving and Dead sleep: Hippocrates accounts it among acute Diseases because of the Choler; and among Chronick because of the Flegm: And Avicenna saith, That it continues sometimes seven months, and sometimes ends in a Chronick Disease, and an Hectick. I have several times observed this Feaver, wherein it never lasted above a Month, unless it degenerated.

2. A double Tertian. It has the same Prognosticks with a single Tertian, save this is much more dangerous, because it comes from a reduplication of the Cause.

XII. A Compound Quartan. The Prognosticks are almost the same with the Simple: but the Compound as well double as treble are much more dangerous, and more apt to degenerate into other chronick inveterate and incurable Diseases: for the so often returning of the fits emaciates and wasts the Body exceedingly, consumes the radical Moisture, depresses the Spirits, obstructs the Natural, Vital and Animal Functions, and at last brings the Body into an incurable Hectick, Consumption, or Dropsy. But if the Disease be recent, and in a young and lusty person, and proper things be exhibited in time, there is hopes. Contrariwise, happening to the Aged, and such as are of a weak nature, especially in the Winter time, it is desperate; and if it continues long it is Mortal.

XIII. Febris hectica simplex, the simple hectick Feaver is dangerous, if it turn into Marasmus, which is when the Eyes are hol-

low, bones stick out, colour of the Skin like lead, cold and dry, and the Guts or Belly seem to stick to the Back, it is then incurable.

A simple Hectick of it self is curable, nor is it difficult to be performed, if it be Recent; and in a person young: In one Aged, the Cure will be much more difficult, if the Disease be inveterate, because of the natural wasting of the Radical moisture: but the difficulty or easiness of the Cure you must learn from the Causes and Vehemency of the Symptoms, compared with the Bodily strength of the Sick. By so much as it approaches nearer to a Marasmodes, by so much the more difficult is the Cure. An Hectick most commonly happens from the sixteenth year to the fourtieth, because in those ages the heat is the more Intense, and sooner consumes the Body: But they who younger or elder are seized with a Hectick, do more easily escape, and are often perfectly cured.

XIV. Marasmodes, An Hectick with a Consumption, this is much more difficult to Cure than the former, but not impossible to be done, if the Sick be either under sixteen or above forty, because the heat is more feeble, and not so firmly concentrated: if it be accompanied with fits of the Mother, or any Disease of the Brain, it is mortal in a short time. Sometimes by a palliative cure, life is protracted a long time, chiefly in Women, and more especially if their Courses be stopt, for that Blood does in a manner sariate the mouth of the hungry Lyon, by humecting and quenching the violence

of the heat, where by the fleshy substance is in some measure spared: The nearer it approaches to a Marasmus, the less hope there is of a Cure.

XV. Marasmus, A Hæctick with a Universal Consumption of all the solid parts. This is the State of an Hæctick, and its last age, for it never comes to a declination, because in its degree it is incurable; yet here a palliative cure has been instituted and may take place after a while, yea for some Months; and the nearer it is to a Marasmus, the longer may the Palliation prevail, and life be protracted; but the hopes of an absolute cure will be Vain; for that since it has seized and consumed the Spermatick parts, they are no more to be restored.

XVI. Morbilli, Sudamina, Rubiæ, the Measles. A Cholerick Flux of the Belly is dangerous, for it brings many to their ends: so also a Bloody flux. The Measles also sometimes come forth Critically, and sometimes Symptomatically. Critically, when nature having either in part or in whole, overcome the putrefaction and malignity, and driving the Corrupt matter to the External parts, does sensibly abate the Disease. Symptomatically, when the Morbifick matter is by nature transmitted to the Skin, before it is concocted, or the malignity corrected; whence the Sick receives no ease, but nature (by wrestling with the Disease) having weakened her self is conquered. However in the beginning, and augmen-

tation, suspend Judgment, for it will be dubious and uncertain, till about the end of the state, or declination. The Pulse like that in perfect Health is dangerous, for Nature out of weakness concocts not the Humors, and then though the Sick seems freed from his Fever, yet he grows worse and worse, and draws towards Death. Raving is no good Sign, but not commonly Mortal, if it vanishes with a plentiful Sweat; but a persevering Delirium is very dangerous, and presages a Phrensey. A convulsion with Raving; Or a Trembling motion of the Hands and Tongue; Or frequent Heart Burnings and Hiccoughs; Or extream loathing of Food; Or violent and manifold excretions in the beginning and augment of the Disease; Or a suppression of all evacuations in the state of the Sickness; Or a Phrenzy or Lethargy after the eleventh or fourteenth day; Or, a fat and oily Urine, black or livid; Or made in great Quantity, the Fever not abating; Or many plentiful Sweats, not diminishing the Disease; Or a Violent flux in the beginning of the Disease; Or if the Eruptions of the skin be few, small, and of a bad Colour; Or if they strike in again, whereby the venomous Morbifick matter retires to the more noble parts; all these last enumerated Signs are tokens of Death. But Deafness in the state of the Disease: Or Sneezing (provided the Lungs be sound;) Or a suppression of all Evacuations in the beginning and augmentation of the Disease; Or Critical evacuations in the state and declination

tion; Or Urine with signs of Concoction, having a laudable Enæorema, and continuing many days, and continually uniting it self, and descending by little and little to the bottom; Or, Critical Sweats, wherein the Sick is better after them; are all good signs of health.

XVII. Exanthemata, Erythmata, Variolæ, the Small Pox. The judgments hereof you may find in Chap. 42. Sect. 5. And whatever we have said in the foregoing Section, ought fully, yea in a larger Sense if possible, to be understood here. To which add, that the greater the breakings out are, the greater is the malignity. If they be Critical, it shews that Nature will conquer. If they be of a violet color, green, or of a Lead color, they are dangerous, and for the most part Mortal.

XVIII. Febris petechialis, peticularis, punctularis, lenticularis, Febris purpurea, the spotted Fever, generally ends in seven days time; if the spots turn livid or black, and the Urine look as it did in health. prepare for death, for it is coming.

¶ All that we have said in Sect. 16. foregoing is to be applied in this Disease: to which add, that if the purple Spots be many and large, of a benign color and come forth Critically, they are signs that Health will succeed: but if they be few, small, of a bad color, and Symptomatical, they signify that nature is worsted; and it is yet worse if they vanish or go in again.

XIX. Morbus Hungaricus, Fe-

bris Militaris, The Hungarian Disease, Calenture, or Camp-sickness. If in the State of the disease the Morbifick matter is evacuated by stool, which is according to the nature of the Cause; Or if the matter tend to the Ears, when the Disease doth decline, and then come to Suppuration, you may positively conclude that health is a coming. But if the Parotides (or risings behind the Ears) be in the beginning, Augmentation, or state of the Disease, they are deadly.

XX. Sudor Anglicus, The Sweating sickness, or English Fever. This Disease is very dangerous, for it swept away Multitudes of those who were infected with it, and they dyed presently without any long languishing or staying for any Abscess to appear. It ended commonly in twenty four hours, and was for the most part Mortal, unless the Sick was very careful of himself. And after the Sick has been perfectly well, its malignity has been such, that it has seized the same person a second, and sometimes a third time, with the like Symptoms, and danger.

XXI. Pestis, Loimos, the Plague or Pestilence, is always dangerous; but if no Buboes come out, or if they appear and go in again, or spots appear of a livid or black colour, it is deadly.

The Prognosticks of this Disease are manifold, but that we might not repeat one thing twice, understand that all the Prognosticks at Sect. 16. foregoing are to be understood here in the fullest and most com-

comprehensive sense. To which add, That experience has taught us, that many have escaped with most deadly signs; and others have perished, under all the significations of Recovery. The coming out of Carbuncles or Buboës in the Groin and other parts shew great malignity and danger, but the blew and livid spots threatens most, and commonly presage Death in a few hours. But Carbuncles and Buboës by how much they are farther from the Heart, grow faster, and suppurates sooner, by so much the less dangerous are they: But if they increase suddenly with bad Symptoms, it is evil. Carbuncles very great, of an evil Color, and with an eating Ulcer, or which turn into a Gangreen, are Mortal; So also if they be near the Heart, or rise upon the Throat. Many Carbuncles are more dangerous than few; but contrariwise, many Buboës are more safe than few.

XXII. A continual Symptomack Feaver. It is a Feaver following upon some other Disease, and of the kinds of continual Feavers, as we have already laid down, lib. 1. cap. 56. Sect. 1. § 10. The Symptomack Feaver commonly Vanishes, if the Disease

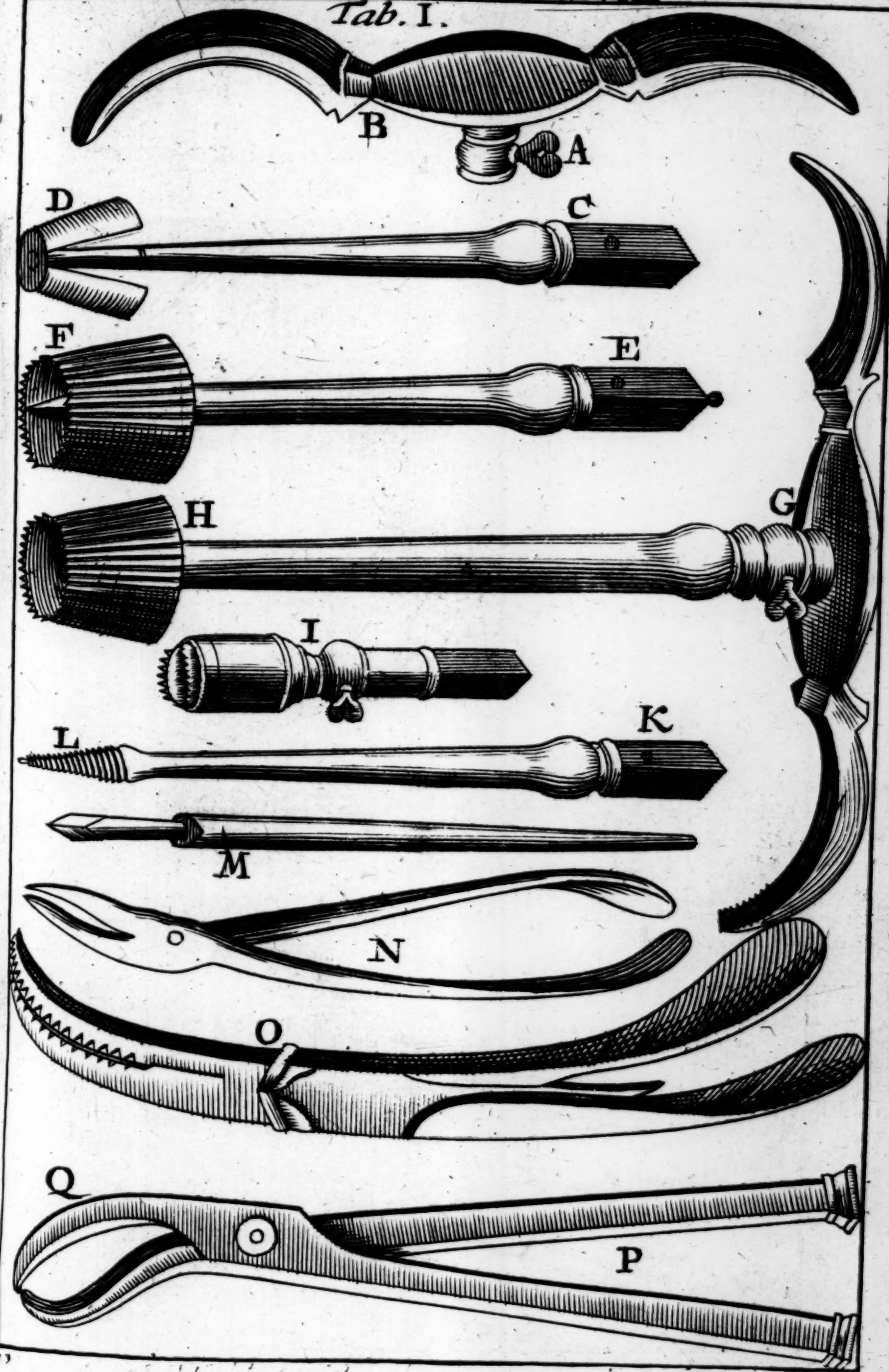
causing it is cured, *causa enim ablatâ, tollitur effectus*; if Raving or a Convulsion accompanies any of them, Death is to be feared: if a Woman also be exceedingly troubled with fits of the Mother, Or a Syncope, it is very dangerous: So also if the Hiccough, or a violent Vomiting seize, unless it be Critical, and then it is by no means to be stopped. A Looseness, if it be Critical (that is proceeding from a Conquest of Nature over the Morbifick matter, whereby it tends to expel the whole or a part thereof) is a healthful sign, and ought not to be stopped: A Symptomack Looseness is not good, yet ought not to be stop't at the very first, if it does not very much weaken the Patient, lest the vitious humor should flow back again to some principal part. Sweating, if it be not Critical, but Symptomack (that is, caused through the Vehemency of the Disease) very much weakens the Sick, and as it were dissolves the Body. This ought to be suppressed; and in order thereunto the Sweat should not be wiped off, but suffered to dry about the Pores of the skin, to stop them up, that more may not follow.

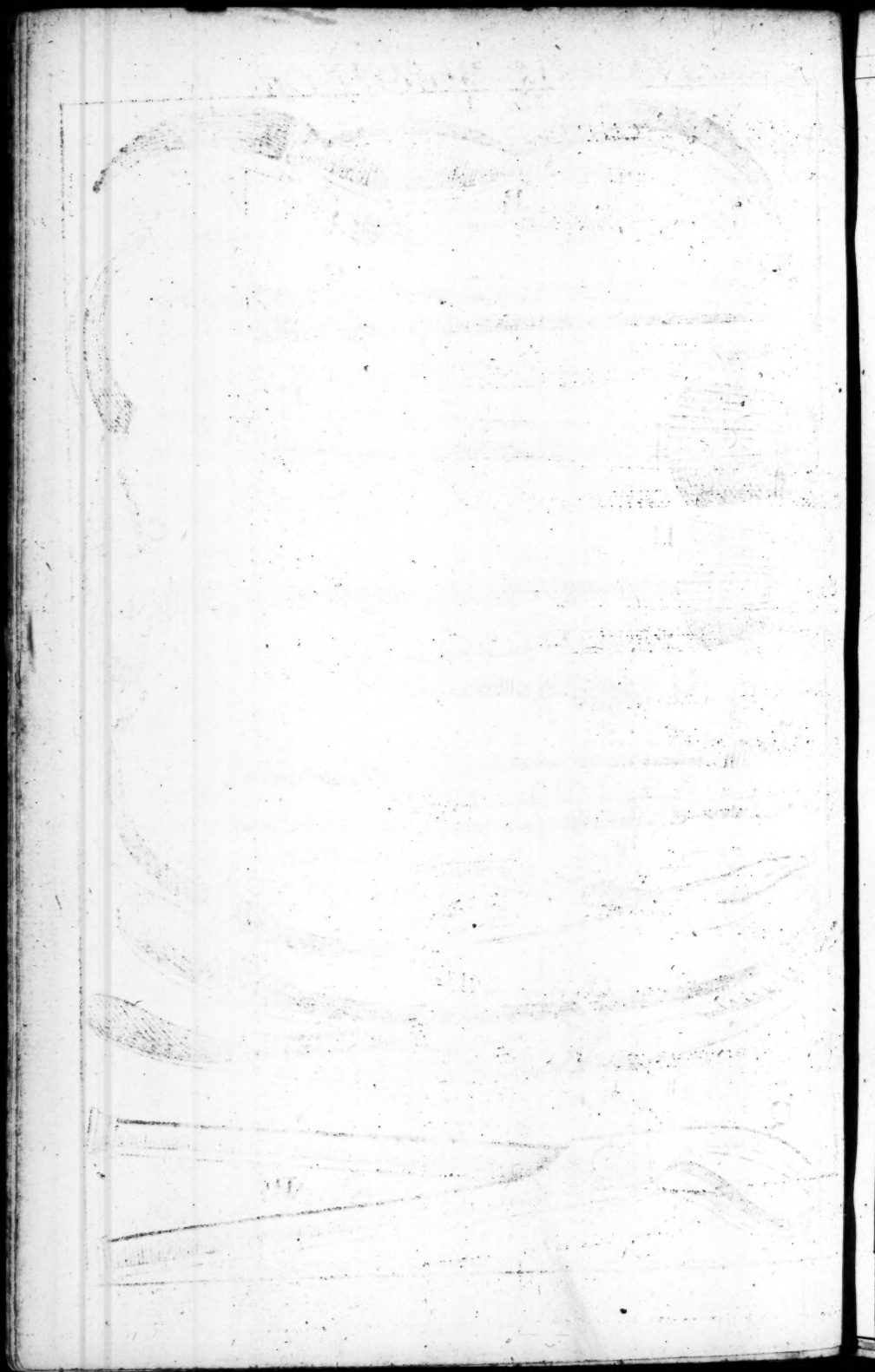
Libri Secundi FINIS.

100

SYNOPSIS MEDICINÆ

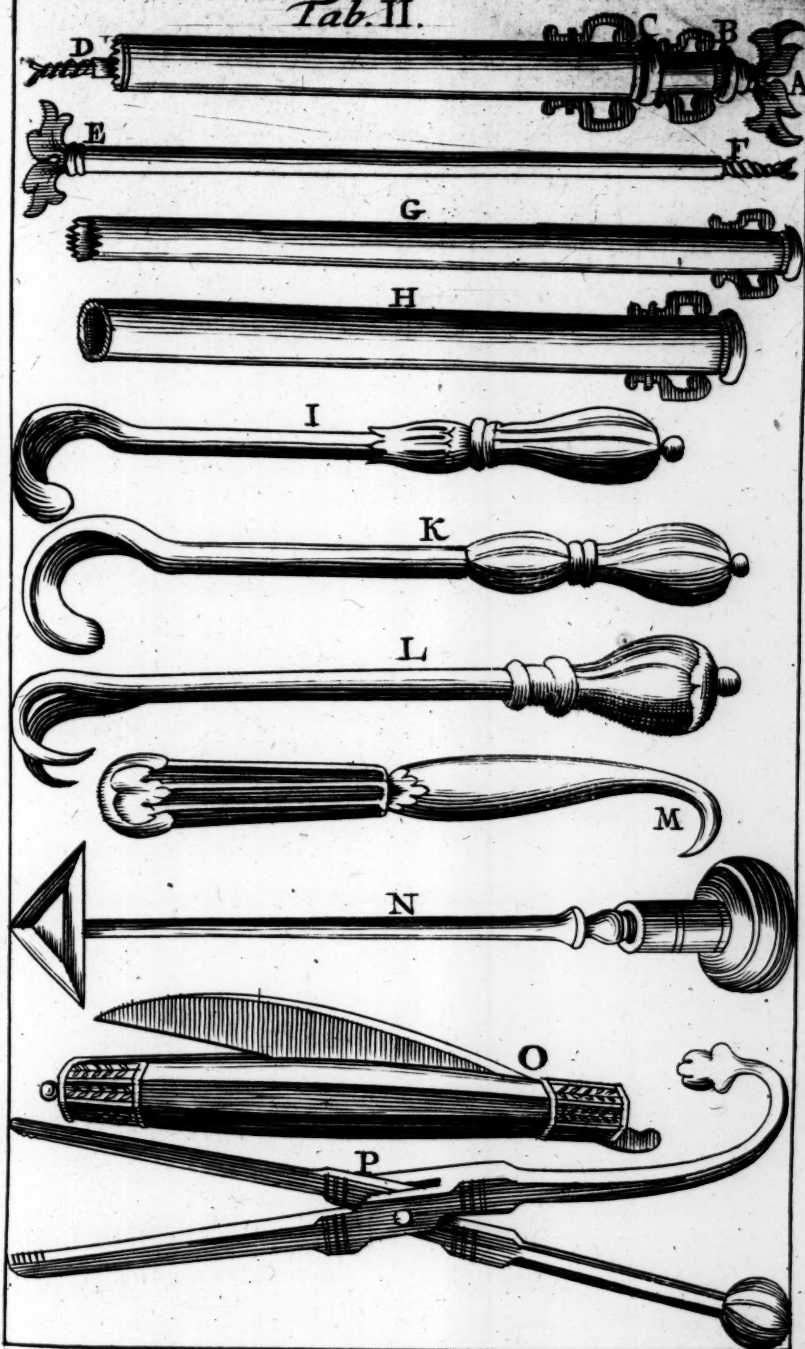
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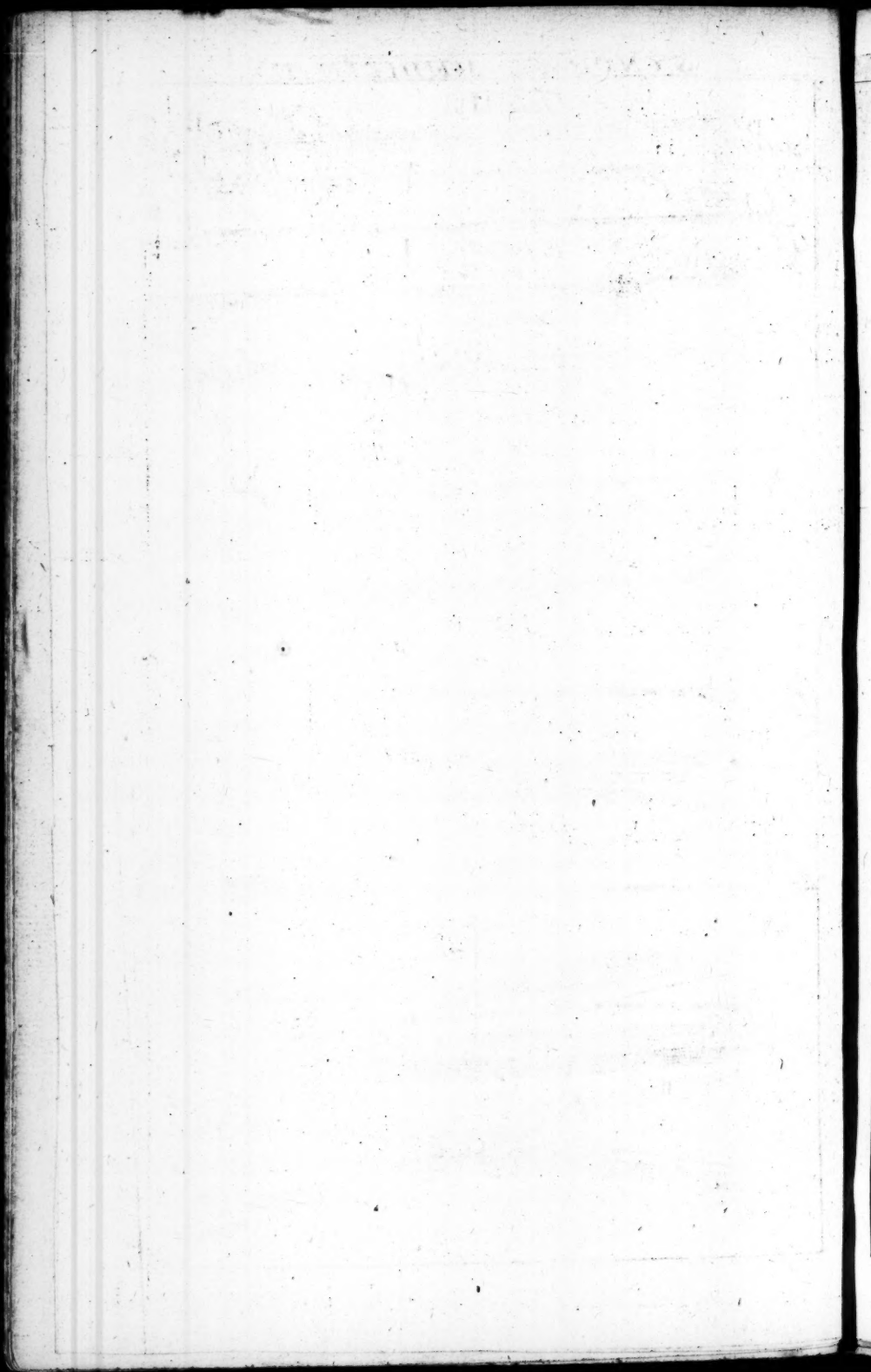


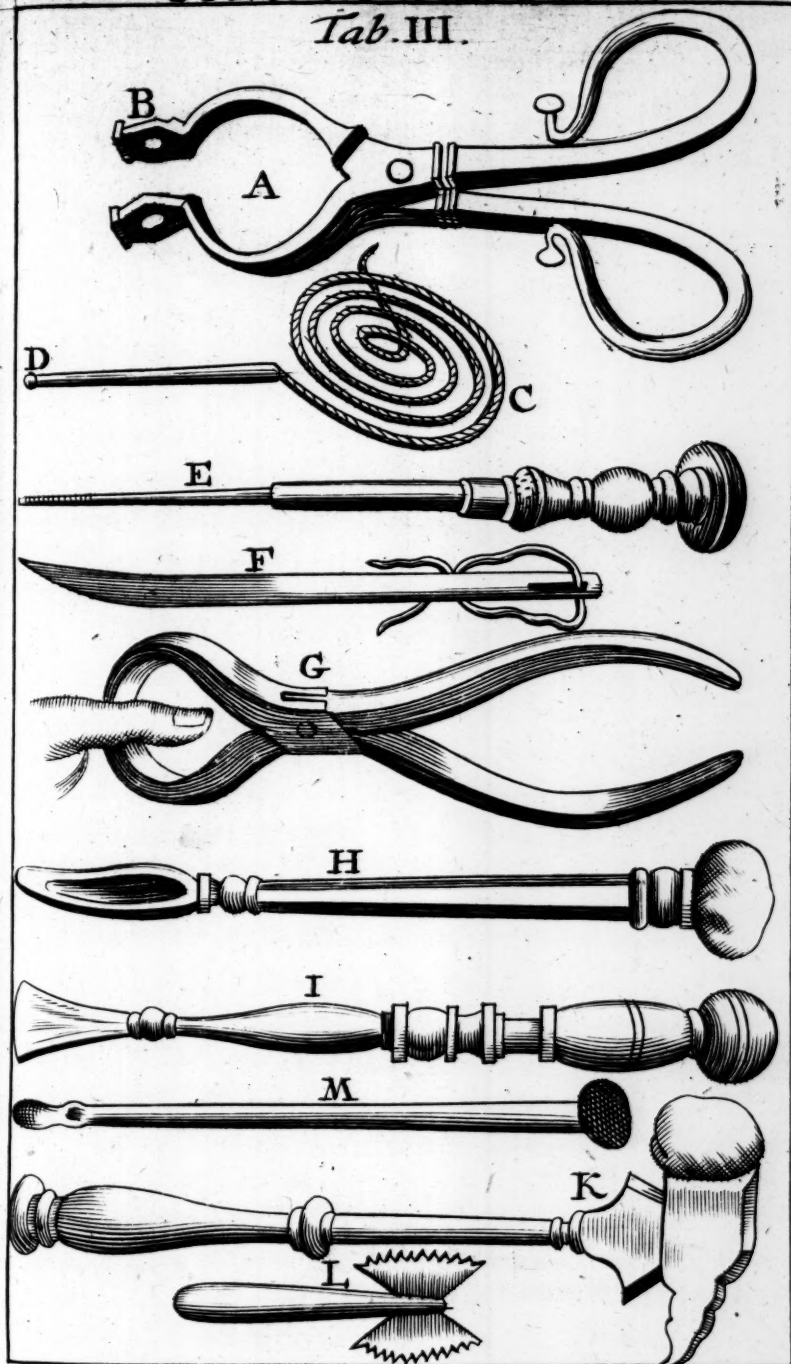


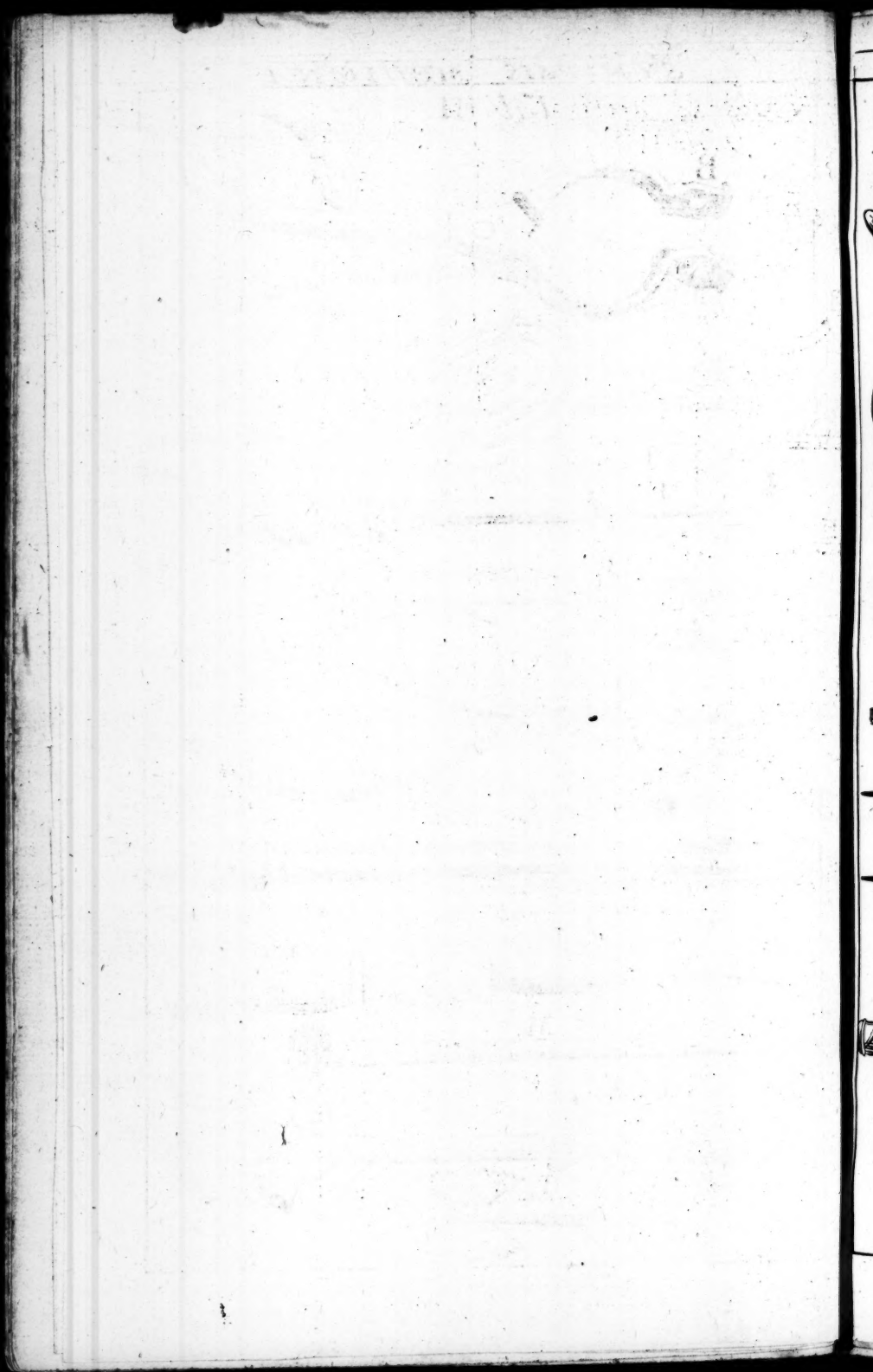
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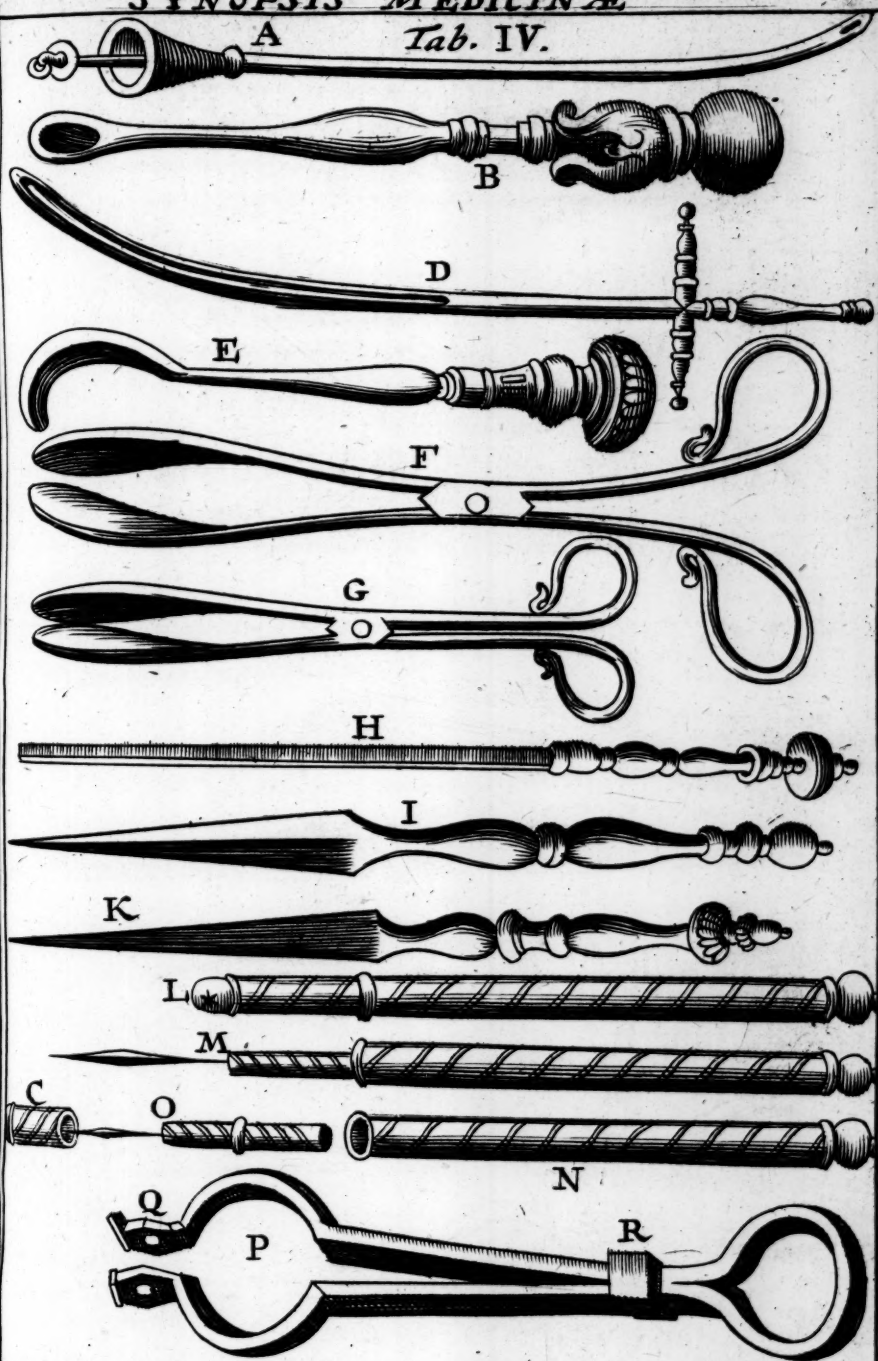
Tab. II.











THEORY OF PRACTICE
PART IV

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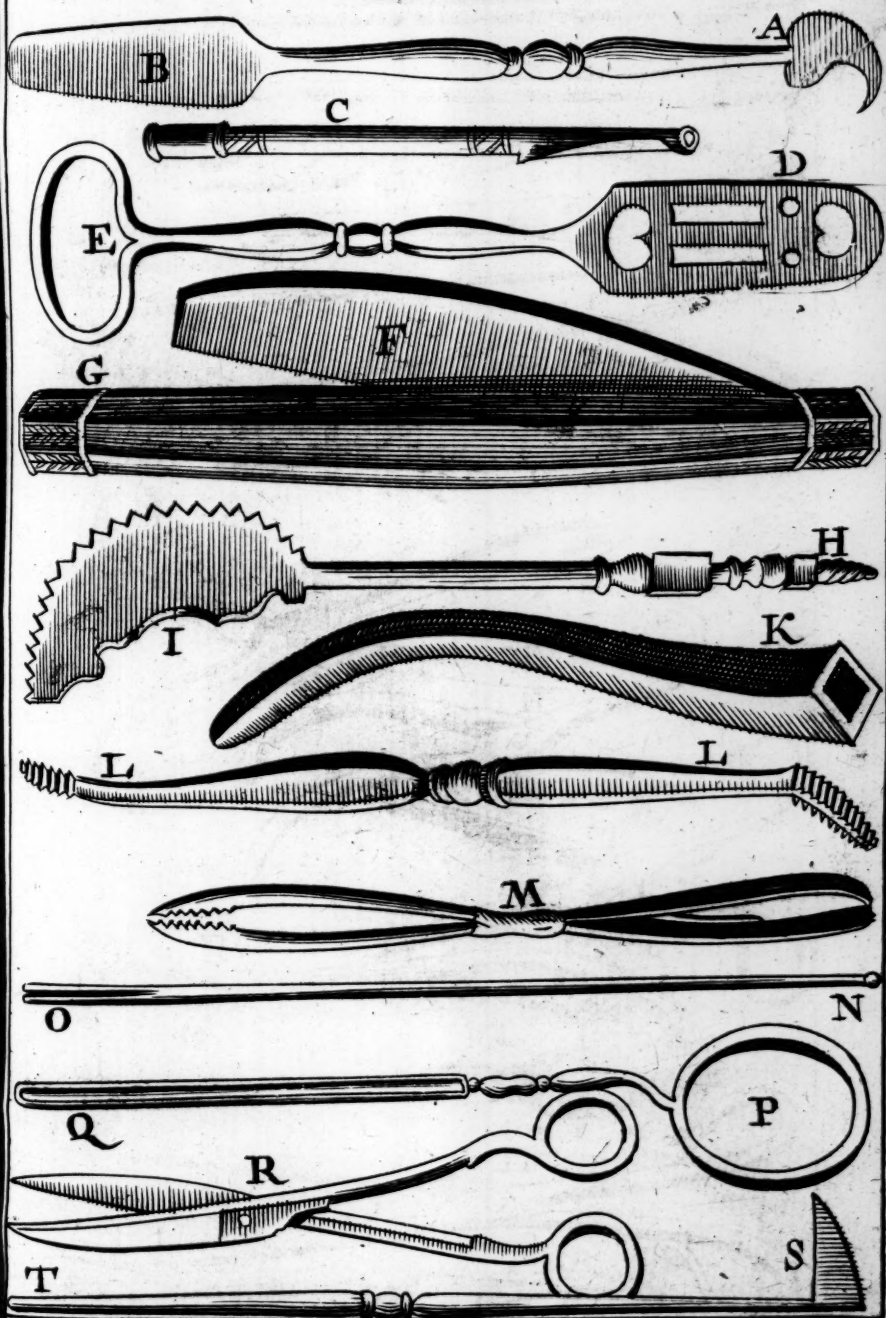
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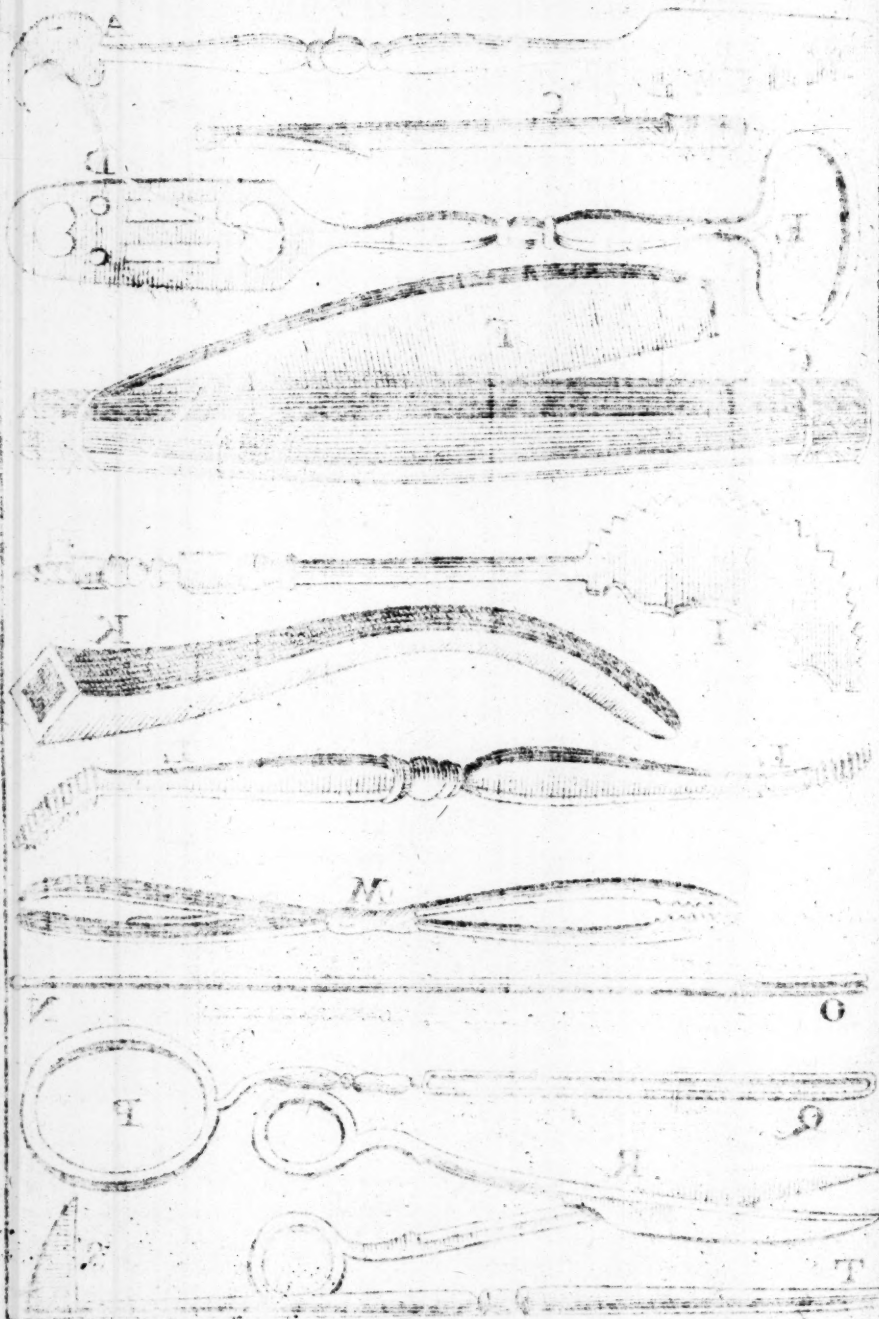
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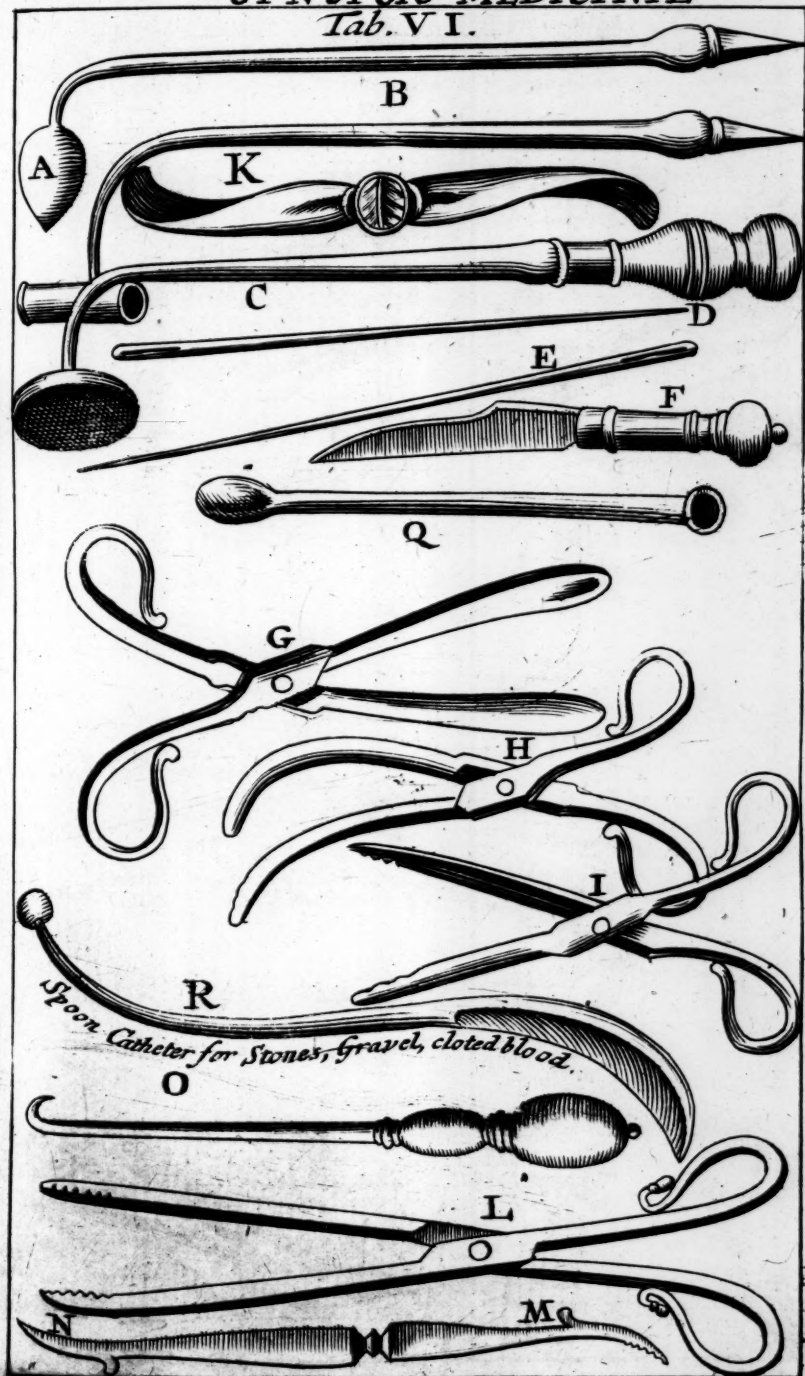
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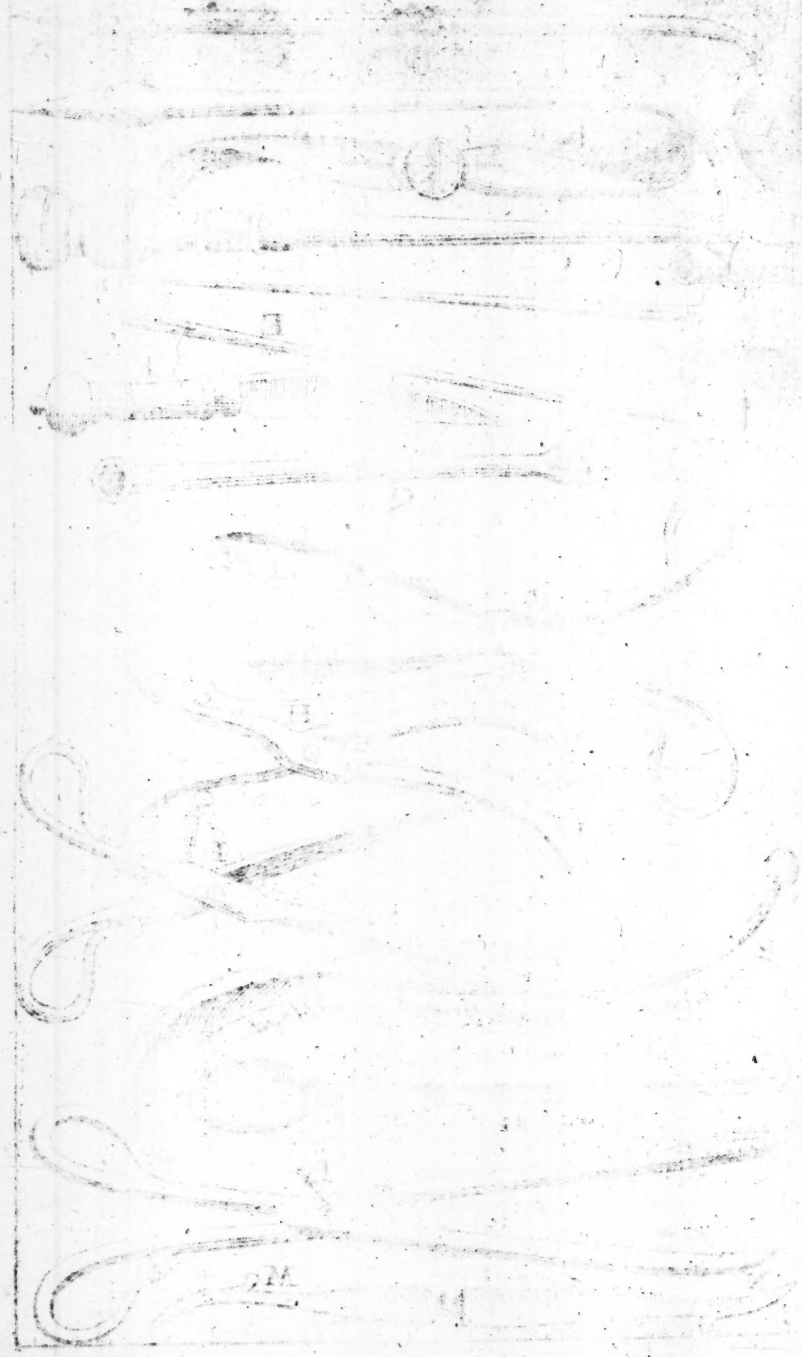
Tab.V.





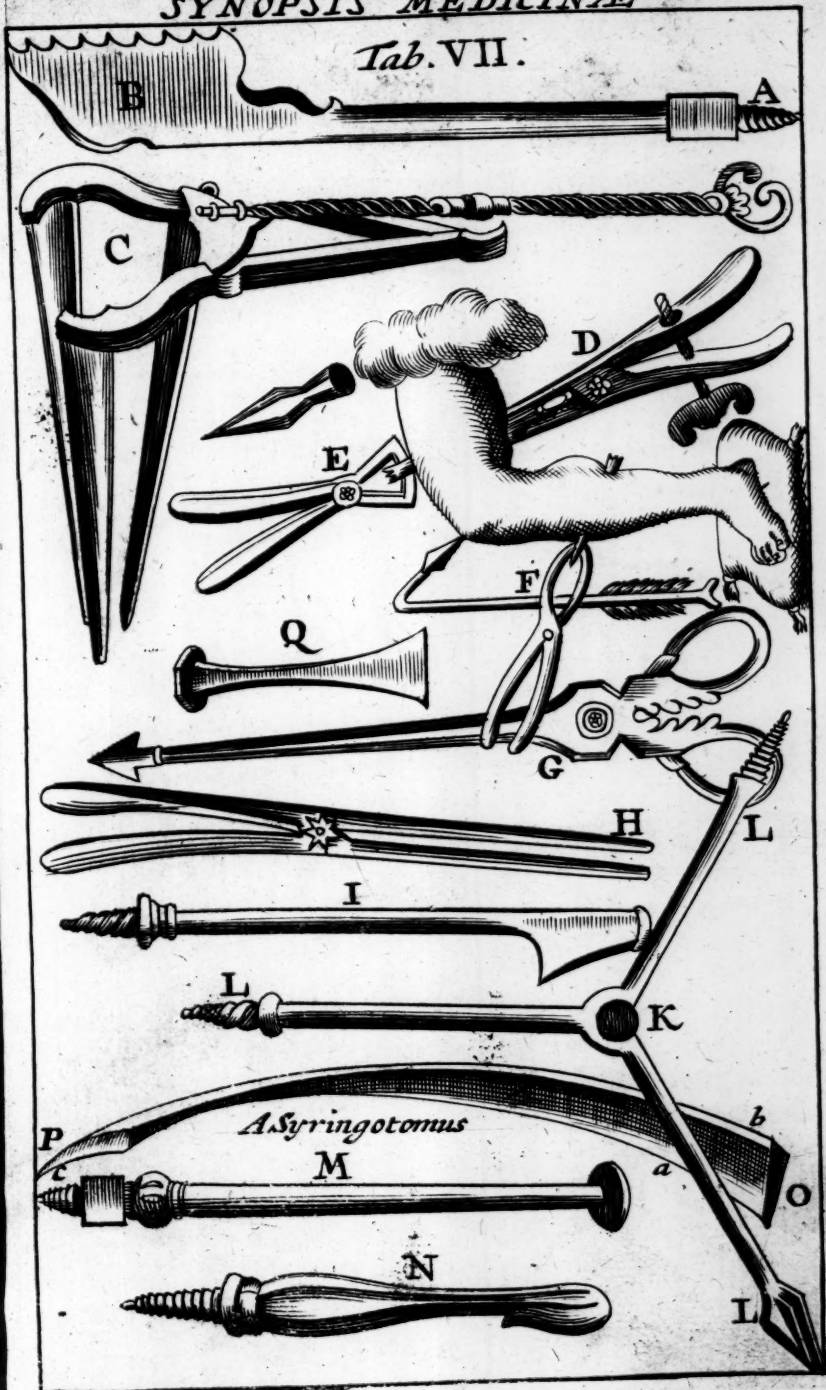
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Tab. VI.

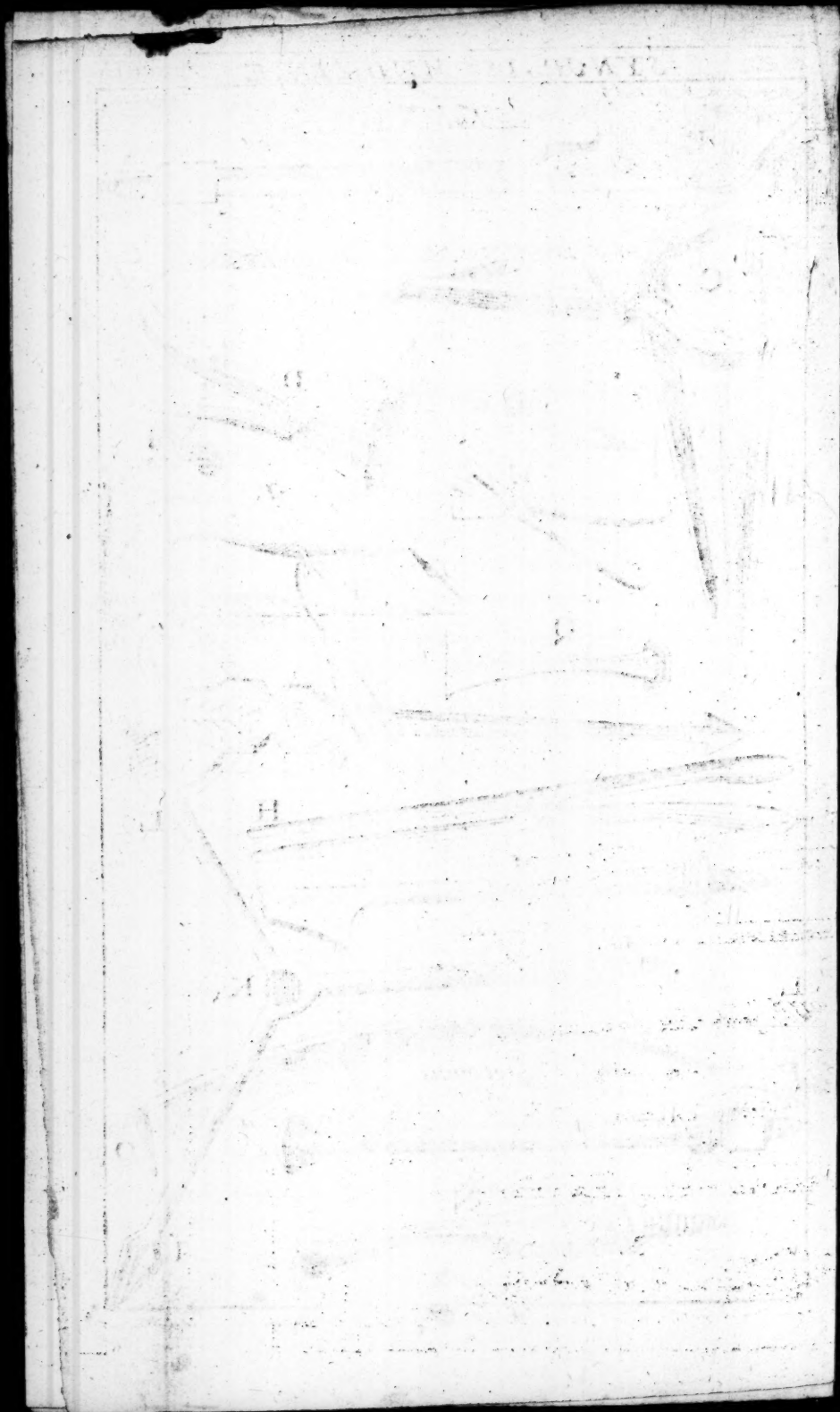




SYNOPSIS MEDICINÆ

Tab. VII.

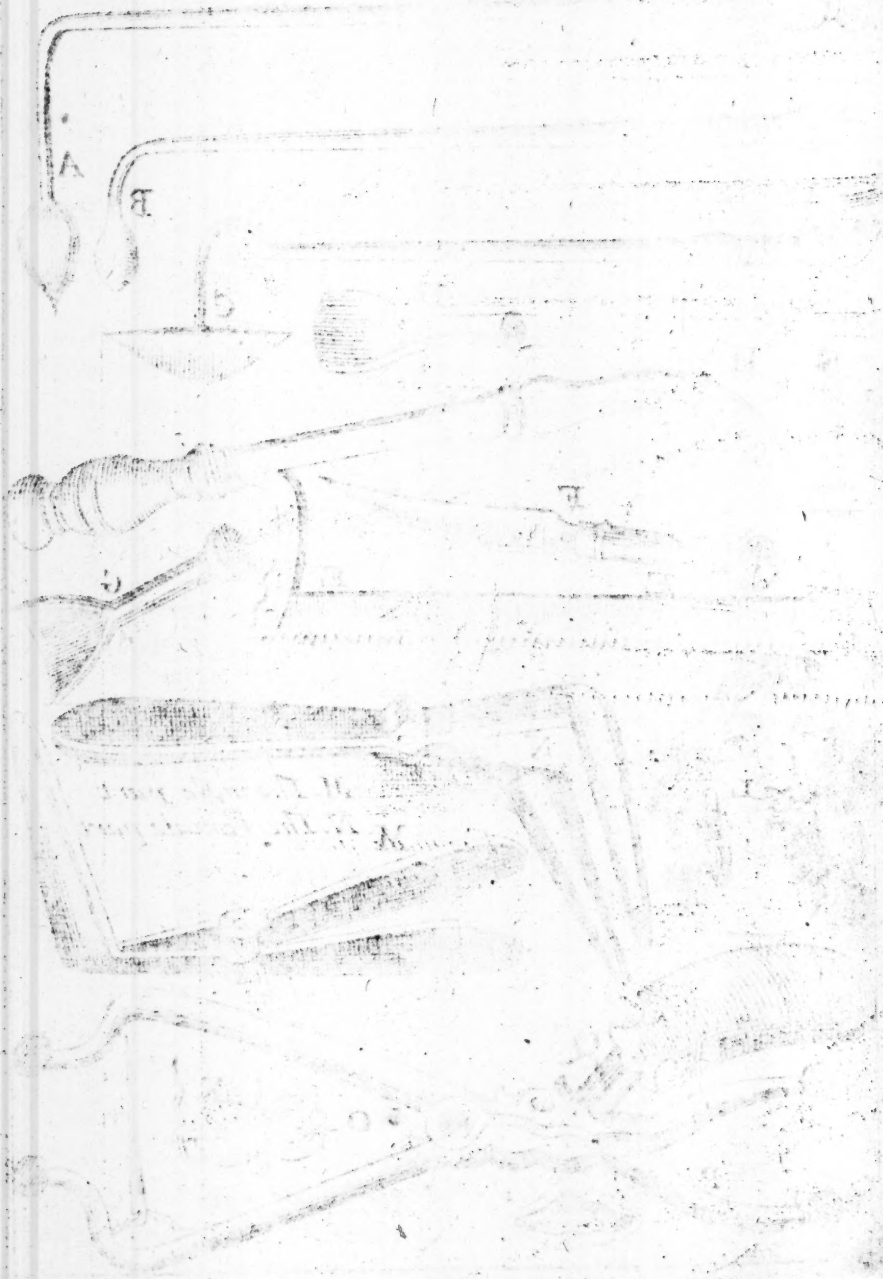




SYNOPSIS MEDICINA

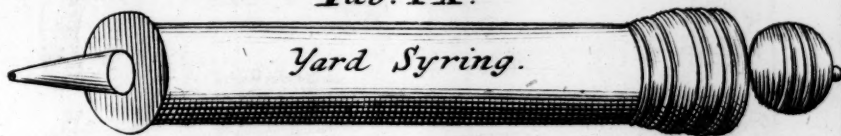
Tab. VIII.





SYNOPSIS MEDICINÆ.

Tab. IX.



Yard Syring.

See Lib. 3. Cap. XXI Sect 185. 186. 187. 188. page 513. & 514.



Womb Syring



Clyster Syring
The Pipe A may be
made long and Crooked.



Fistula Syring.

Mullets and Forceps for drawing of Teeth



a Tooth scraper



3 pointed levatory.



A Polychon.

SYNOPSIS OF MEDICAL HISTORY

1. Name of Patient: [illegible]
2. Age: [illegible]
3. Sex: [illegible]
4. Date of Admission: [illegible]
5. Referring Physician: [illegible]

6. Present Illness: [illegible]
7. Past History: [illegible]
8. Family History: [illegible]

9. Physical Examination: [illegible]
10. Laboratory Examinations: [illegible]
11. Radiological Examinations: [illegible]

12. Pathological Findings: [illegible]
13. Differential Diagnosis: [illegible]
14. Final Diagnosis: [illegible]

15. Prognosis: [illegible]
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17. Outcome: [illegible]

18. Remarks: [illegible]
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20. Date of Report: [illegible]

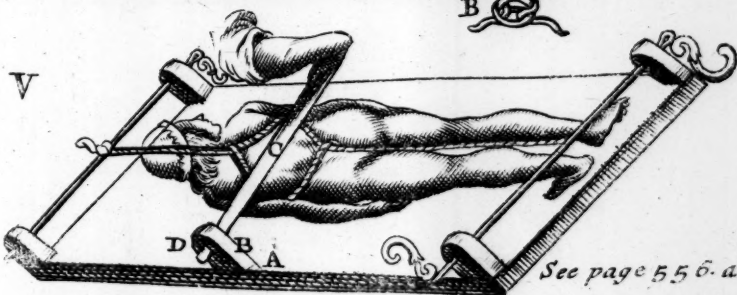
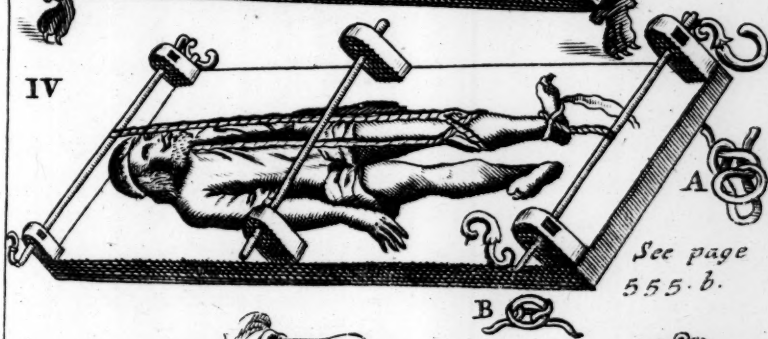
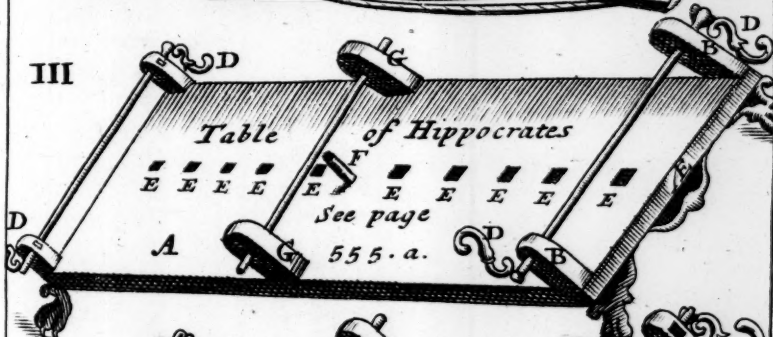
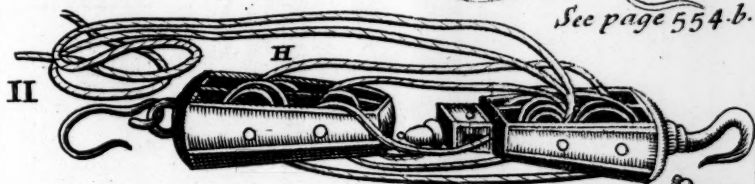
SYNOPSIS MEDICINÆ Tab. X.



Vitruvius his

Pulley.

See page 554.b.



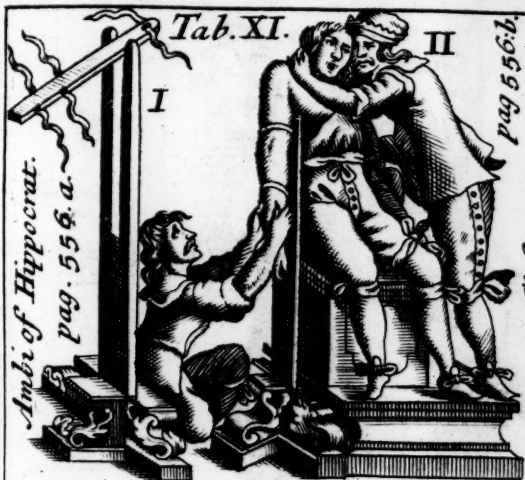
MEMORIS



SYNOPSIS MEDICINÆ. Tab. XI.

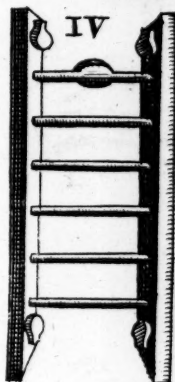
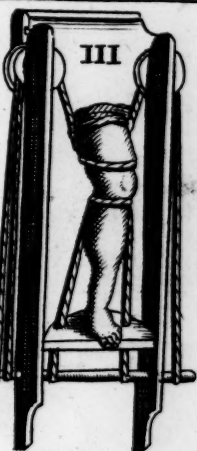
Tab. XI.

*Ambr of Hippocrat.
pag. 556. a.*



pag 556. b.

Gleesconium Galeni



Reductive Ladder.

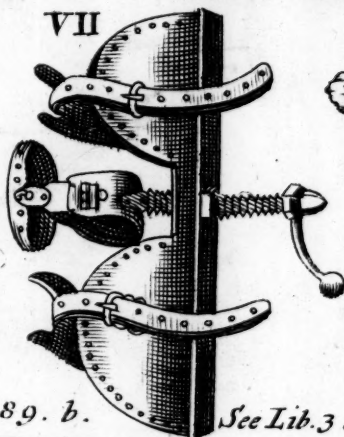
See pag. 557. a.



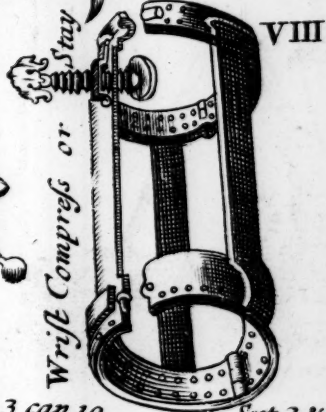
Elbow Compress or Stay.

Knee Compress or Stay.

Pag. 389. b.

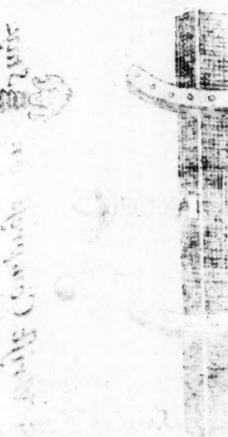
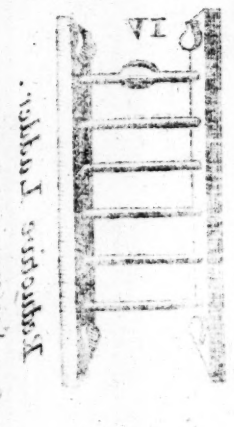
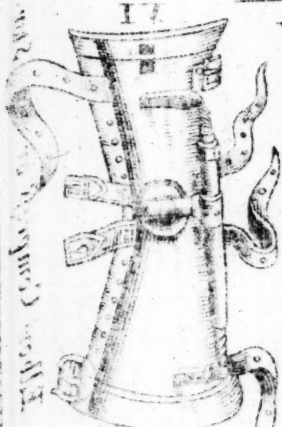
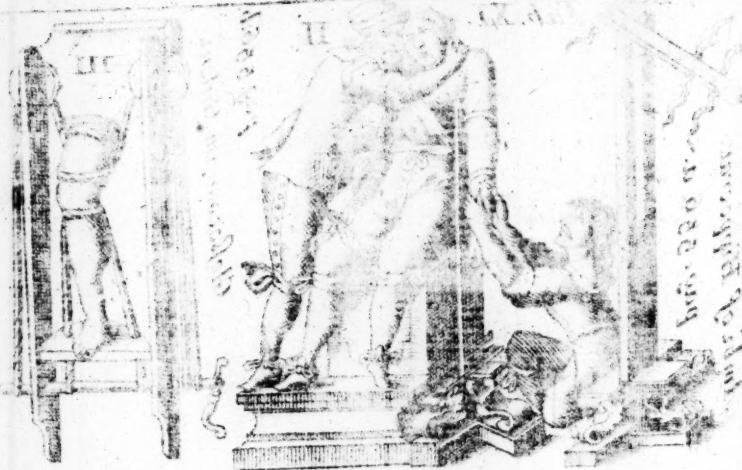


See Lib. 3 cap 19.



Wrist Compress or Stay

Act. 3 & 4.



SYNOPSIS MEDICINÆ.

Tab. XII.





Engraving of a man with various medical instruments and anatomical details.

SYNOPSIS MEDICINÆ. Tab. XIII.

Lib. 3. Cap. 15. Sect. 39.

Pag. 569. a

Pag. 568.

Lib. 3. Cap. 17. Sect. 11.

570. a



Pag. 409. a 569. b.

Pag. 409. a.

Pag. 409. a.

571. a



Lib. 3. Cap. 17. Sect. 10. Lib. 3. Cap. 24 Sect. 15. 4. 13.

THE HISTORY OF THE
 LIFE OF THE
 REVEREND FATHER
 JOHN BAPTISTE
 DE LA SALLE

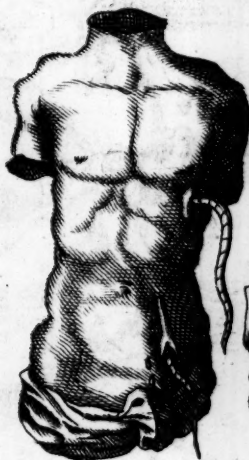


BY THE REV. FATHER
 JOHN BAPTISTE DE LA SALLE

SYNOPSIS MEDICINÆ. Tab. XIV.

Lib. 3. Cap. 16. Sect. 7. 8.

*Lib. 3. Cap. 31. Sect. 85. 4
1. 2. 4.*

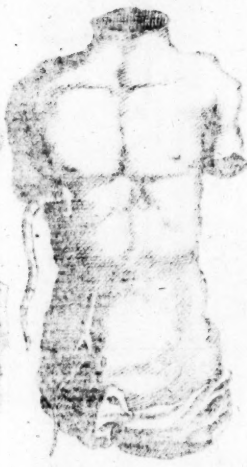
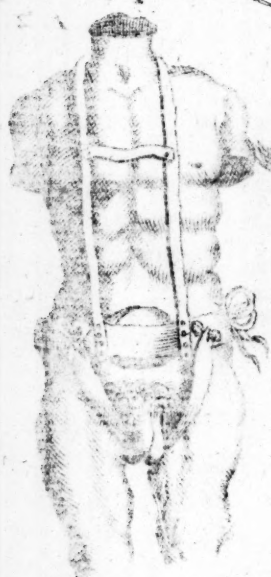


*Pag. 361.
a.
756. a.*

Lib. 3. Cap. 26. Sect. 20. 4. 3. 5. 7. 8.

Tab. 3. Cap. 3. Musculi
1. 2. 3. 4.

Tab. 3. Cap. 3. Musculi
5. 6. 7. 8.



Tab. 3. Cap. 3. Musculi
9. 10. 11. 12.

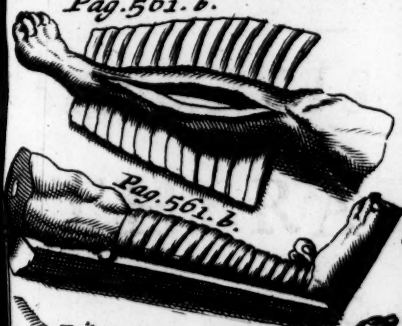
Tab. 3. Cap. 3. Musculi
13. 14. 15. 16.

SYNOPSIS MEDICINÆ. Tab. XV.

Pag. 561. b.

Lib. 3. Cap. 15. Sec. 21. 22.

Lib. 3. Cap. 32. Sec. 44. 25



Pag. 561. b.

Lib. 3. Cap. 17. Sec. 8-9



Pag. 410. a



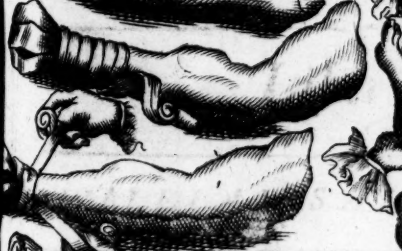
Pag. 508. a.



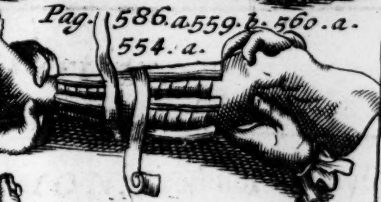
Pag. 384. a. b.



Pag. 586. a.



Pag. 586. a. 559. b. 560. a. 554. a.

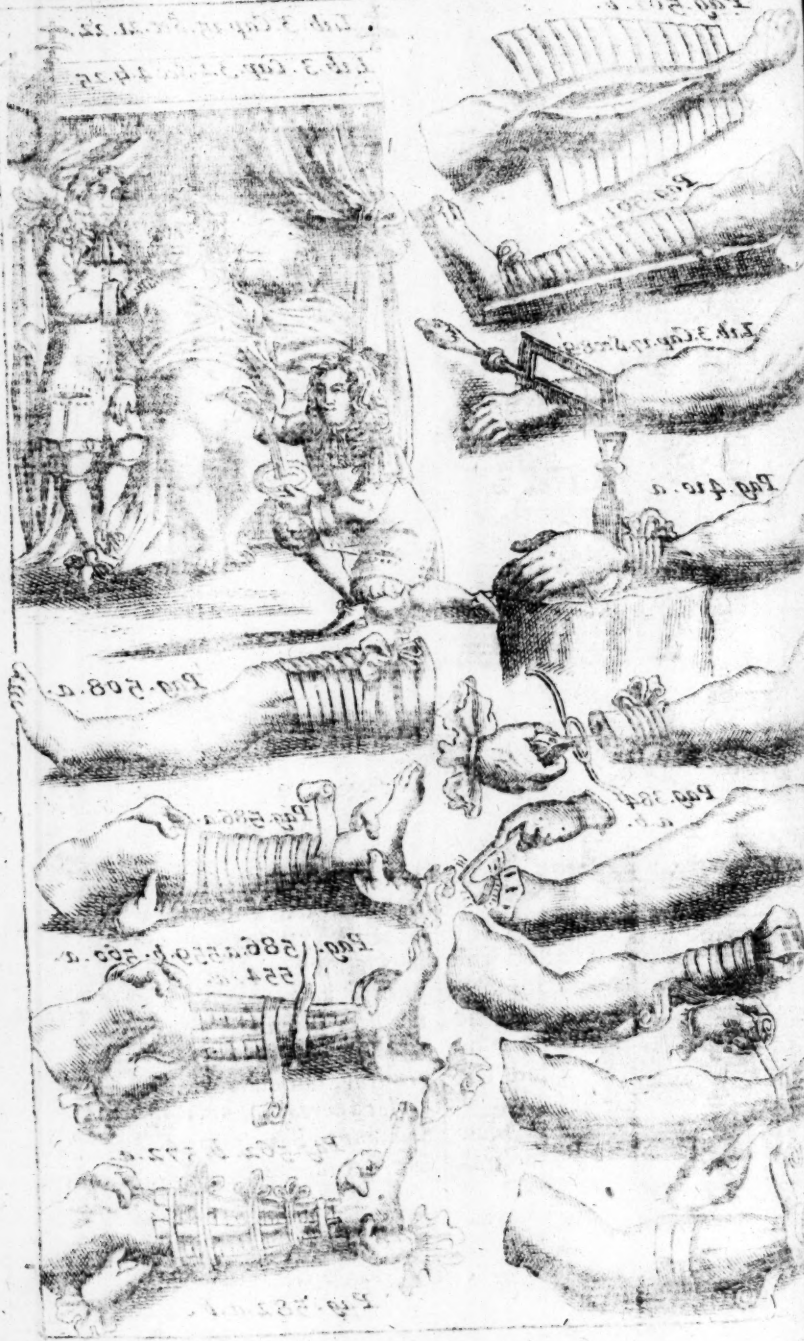


Pag. 562. b. 572. a.



Pag. 582. a. b.





SYNOPSIS MEDICINÆ.
THERAPEUTICA.

Containing
The Methodick Way of Curing
DISEASES.

Astrologically Propounded and
Physically Applied.

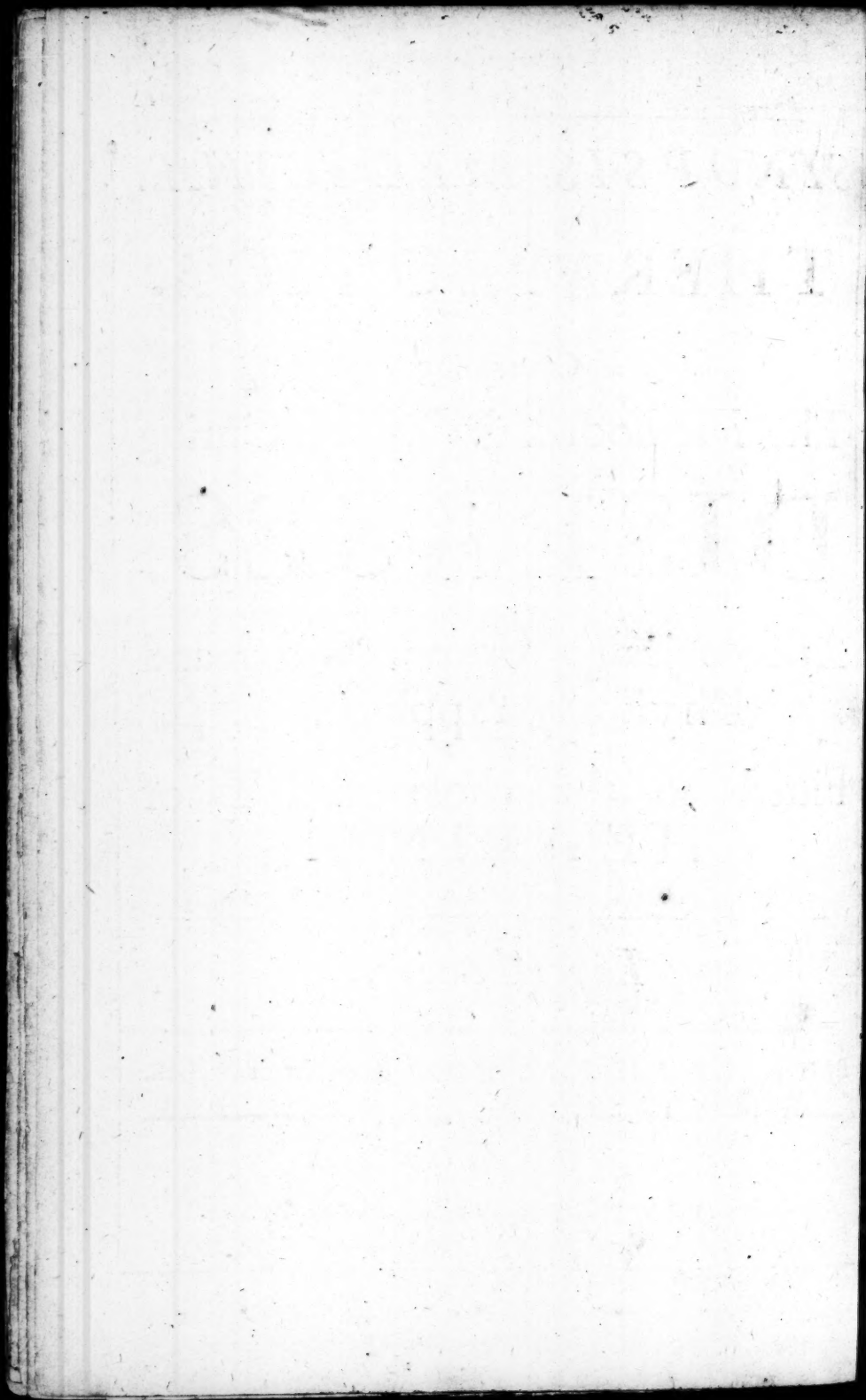
Fitted to the whole ART of
HEALING.

Liber Tertius.

By WILLIAM SALMON, Professor of Physick.

L O N D O N,

Printed by Thomas Dawks, 1680.





SYNOPSIS MEDICINÆ.

Liber Tertius.

THERAPEUTICA.

CHAP. I.

Of the general Method of Physick.

I. Ἰατρικὴ καὶ ἰατρικὴ, *Medicina* ; *Physick*, or *Medicine*, is the Art of Healing. Or otherwise, according to *Galen*, *Scientia salubrium, insalubrium, & neutrorum*, the knowledge of things healthful, unhealthy, and neutral.

II. *The thing to be healed, is the body of Man* : Or thus : *The subject of Medicine, is mans body, and the end, is Health.*

For as all Arts and Sciences have Subject about which they are exercised, (as that of *Grammar*, which is *Speech* : of *Rhetorick*, which is *Eloquence* : of *Logick*, which is *Reason* : of *Arithmetick*, which is *Number* ; of *Geometry*, which is *Measure* : and

of *Musick*, which is *Sound* ;) so also hath *Medicine* or *Physick* its proper subject, the which is the *Body of man* : whose description, quality, and affections, are hereafter to be declared.

III. *This subject, as a Body, hath always a cause and a sign, the which is to be considered, as it is healthful, unhealthy, and neutral.*

For, as *Galen* and *Herophilus* say, the *Body* doth receive (either health, sickness or neutrality ;) the cause doth effect (the aforesaid affections ;) and the signs signifie (the aforesaid causes :) for where there is an effect, there must be a cause :

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and where there is a cause, there will be some sign of it.

IV. *Medicine is either Speculative, or Active.*

The difference between Speculation and Action (in Medicine) is this: the one Passively looks upon and contemplates the whole Art or Science: the other Actively makes use of the same, and puts those Speculations in practice.

V. *The Speculative part of Medicine is threefold: to wit, in Physiologia, Hygieine, and Pathologia.*

VI. *Φυσιολογία, Physiologia, the knowledge of things natural in Medicine, is that which considers the nature of mans Body, the which is twofold: to wit, First, Anatomically, considering its parts: Secondly, Physically, the affections of same.*

VII. *Ῥημνῆ, Græcè; Ars sanitatis tuendæ, Latinè: the knowledge of things not natural in Medicine, is that by which we are taught to preserve health.*

For having considered mans Body both as to its parts, and to its affections, being in Health, it was necessary (to follow exact order and method) to shew that part of the Art in the very next place, which (being in health as aforesaid) should preserve it in that due Decorum, and make it able to withstand Diseases.

VIII. *Παθολογία, Pathologia, the knowledge of things besides nature, is that which enquireth into the causes, signs, and Judgments of preternatural affects in mans Body, that is of Diseases, either in their beginning or confirmation, the*

which is either neutrality, or real sickness.

IX. *And it is threefold, to wit, in Ætiologia, Diagnostica, and Semiotica.*

X. *Αἰτιολογία, Scientia causarum morborum, the Doctrine of causes, is that by which we search, both Philosophically and Medicinally, into the Original causes of all Diseases, thereby to direct the intellect so far, as (by knowing what that is which hurts nature, and obstructs her course) to prepare those things which shall be inimical to the same.*

XI. *Διαγνωστική, Diagnostica, the knowledge of signs or Indications, is that by which we know and understand the cause of every affect, through every part of the Body.*

XII. *Σημειωτική, Prognostica, or the Judgments of Diseases, is that by which we predict (in a probable way) the future contingency and event of every accident. And this is twofold, to wit, Natural and Astral.*

Hitherto of the Speculative part of Medicine; the Active follows.

XIII. *The Active part of Physick, which the Greeks call Θεραπευτική, and the Latins Curatoria, the Curative part, is that by which we extirpate and destroy diseases.*

And this is the fourth, most excellent, and most complete part of Medicine.

XIV. *Therapeutica, the Therapeutics or Active part of Physick, is either Material, or Relative.*

XV. *The material part, is the*

which teacheth the matter of Physick, which the Latins call Medicamenta, and we in English Medicines : and is five fold, to wit, in Botanologia, Mineralogia, Zoologia, Parascualogia, and Pharmaceutice.

And herein you are to consider,

1. The Temperature of Medicines : 2. Their Appropriations : 3. Their Properties : 4. Their Virtues : 5. Their Preparations : 6. Their Uses : 7. Their Doses. Moreover you must know that a Medicine is either Simple or Compound. Simple is that which is made of one single Herb, Root, Seed, &c. Compound is that which is made of a Mixture of several single things of different kinds together : The Temperature shews the degrees of heat, coldness, dryness or moisture. The Appropriation, what parts of the Body, each Sympathize withal. The Properties, whether it Alters only, or Purges. The Virtues, how it has relation to particular Diseases. The Preparation, how it is to be made fit to be received in, or applied to the Body or any of its parts. The Use, how to be exhibited and when. The Dose, the quantity to be given in relation to Age, Sex, or Time.

XVI. Βοτανολογία, the knowledge of Vegetables, Μινεραλογία, the knowledge of Minerals, Ζωολογία, the knowledge of Animals, each the form, temperature, virtues, properties, appropriations, and several uses of Herbs, Plants, Shrubs and Trees; Earths, Stones, Semi-Metals and Metals; Beasts,

Fowls, Fishes, and Insects together with their Appendices.

These three subjects of the material part of the Therapeuticks, we shall not consider in that large extent as have Gherard, Parkinson, Gesner, Baubin, and others, in regard we see not that necessity; but only hint at so much as may make this our present Work compleat in it self, without the help of other Authors, especially, so much as may fit the Apothecaries Shop, and some other intents and purposes hereafter mentioned. Hitherto only of the matter of Medicine, as it is simply and singly considered in it self, in relation to Physick : in the next place, we shall consider the matter, as to its Preparation and Composition.

XVII. Παρεσκευαστολογία; Ars Medicamentorum præparandi, the Art of preparing of Medicines, is that which teacheth how to make Medicines fit to be used about the Body of man; and it is twofold, to wit, Galienical, by Infusion, Decoction, and Expression; or Chymical, which is called in Greek παρεσκευαστὴν Ἐμύπτια, Chymia, seu Medicina Spagyrica, which teacheth how to draw out the very essence and life of things by the force of Fire, bringing forth Tinctures by Extracting Spirits and Oyls by distilling, Flowers by subliming, and Sales by calcining.

What every of these particular Operations are, in their place shall be shewed.

XVIII. *Φαρμακοποιική*, the Pharmaceuticks, shew the Preparation and composition of all Official Medicaments, the which are twofold, either General, as those comprehended in the Pharmacopœia; or Special, as those which are practised by the Author.

Hitherto of the Material part of the Therapeuticks: the Relative follows.

XIX. *Τὸ Relative part* is that which considers the operation of the matter, as it hath relation to the subject, (by Sect. 2.) considered in Chyrurgery and Pharmacy.

XX. *Χειρουργία*, Chirurgia, manual operation, is that by which we know how to cure all External Diseases, the which is considered in Tumours, Wounds, Ulcers, Fractures, and Dislocations.

Under which five Denominations, are couched the substance of External Practice.

XXI. *Φαρμακεία*, Pharmacœa, internal Medicine, is that which teacheth the cure of all Internal Diseases, as they have relation to internal parts: and it is either particular, or general.

XXII. Particular, is that which doth consider Diseases, as

they affect only one particular part of the body.

Of this sort are, 1. All Diseases of the upper Ventricle, or Head. 2. All Diseases of the middle Ventricle, or Breast. 3. All Diseases of the lower Ventricle, or Belly.

XXIII. General, are all such, as universally affect the whole Body.

And they are either, 1. Such as are Chronical, as the Pox, Dropfie, Scurvy, Gout, &c. or 2. Such as (having violent Symptoms) are Acute: of which sort are all Feavers.

XXIV. Hitherto of the Method of teaching; the practical part follows, which is that which shews in what order the foregoing Precepts ought to be entertained and exercised.

For which purpose, that we might not be wanting to any herein, we have done our endeavour in this Third Book of our Synopsis, to answer the reasonable expectations of all, having fitted it as well for the Military Chyrurgions, both by Sea and Land, (if understood) as otherwise, for the young and ingenious Physician, the whole indeed containing, a compleat method of Practice.

CHAP. II. Of Simples appropriated to each Planet.

I **TO Saturn,** Barley, Fumetory, Beech tree, Bifoyl, Birds-Foot, Bistort, Bucks-horn, Plantain, Wild-campions, Pilewort, Cleavers, Clowns-woundwort, Comfrey, Cudweed, Crosswort, Darnel, Dodder, Epithymum, Elm-tree, Omond-royal, Fleawort, Flixweed, Goutwort, Stinking Gladdon, Winter-green, Hounds-tongue, Hawkweed, Hemlock, Hemp, Hen-bane, Horf-tail, Knapweed, Knotgrafs, Medlar, Moss, Mullein, Nightshade, Polypody, Quince, Rupterwort, Rushes, Solomons-seal, Yarrow, Saracens-confound, Service-tree, Ceterach, Tamarisk, Melancholy thistle, Blackthorn, Thorowax, Tutſan, Aconite, Agnus castus, Alphodil, Starwort, Orach, Shepherds-purse, Fearn, Black Hellebor, Mandrake, Opium, Lead, Lapis Lazuli, Allum.

II. To Jupiter, Agrimonia, Alexander, Asparagus, Avens, Bay-tree, Elecampane, Beets, Berony, Bilberries, Borrage, Buglofs, Chervil, Colts-foot, Sweet-Cicely, Cinkfoil, Alecoft, Dandelion, Docks, Bloodwort, Quichgrafs, Endive, Harts-tongue, Hyſop, Liverwort, Lungwort, Sweet-Maudlin Oak-tree, Red Roſes, Sage, Sauce-alone, Scurvey-grafs, Succory,

Ladies-thistle, Cherries, Barberries, Strawberries, Liquorice, Apples, Mulberries, Myrobolans, Olives, Peaches, Pears, Self-heal, Wheat, Madder, Maſtick, Sugar, Honey, Tin, Saphir, Jacinth, Emerald, Coral.

III. To Mars, Arſmart, affarum, Barbary-buſh, Sweet-Bafil, Broom, Broom-rape, Butchers Broom, Bramble, Brooklime, Crow-foot, Wake-robin, Cranes-bill, Cotton thistle, Toad-flax, Garlick, Furs-buſh, Hawthorn, Hops, Madder, Maſterwort, Rocket, Muſtard, Hedge-Muſtard, Nettles, Onions, Dittany, Carduus Benedi-ctus, Radish, Horſe-Radish, Rheubarb, Rhapontick, Monks-Rheubarb, Thistles, Woolly-thistle, Star-thistle, Tre cle-Muſtard, Dyers-weed, Wormwood, Birthwort, Camelion-thistle, Danewort, Eſula, Cornel-tree, Euphorbium, Spearwort, White-Hellebore, Sourgelaurell, Monks-hood, Leeks, Scammony, Colloquintida, Elaterium, Iron, Steel, Antimony, Auripigmentum, White Arſnick, Loadſtone.

IV. To ſol, Angelica, Avens, Aſh-tree, Bawm, One blade, Burnet, Butter-bur, Camomil, Celandine, Centaury, Eyebright, Fig tree, Sainr-Johns-wort, Lovage, Marigolds, Mi-

steto, Peony, Peters-wort, Pimpernel, Railons, Rosa solis, Rosemary, Rue, Saffron, Tormentil, Turnsole, Vipers-Bugloss, Walnut-tree, Cloves, Mace, Nutmegs, Scabious, Sorrel, Wood-Sorrel, Borrage, Gentian, Ivy, Lavender, Bay-tree, Olive-tree, Mints, Date-tree, Oranges, Citrons, Time, Vine, Zedoary, Mirrh, Frankincense, Aloes, Gold, Ætites, Lapis Calaminaris, Amber, Carbuncle.

V. To *Venus*, Alehoof. Alder-tree. Apple-tree. Stinking Arach. Alkakengi. Archangle. Beans. Burdock. Ladies-bedstraw. Bishops-weed. Blites. Bugle. Chickweed. Chich-pease. Clary. Cocks-head. Cowslips. Daisies. Devils-bit. Elder. Eringo. Featherfew. Figwort. Filipendula. Fox-gloves. Gromwell. Groundsell. Kidneywort. Ladies-Mantle. Mallows. Marsh Mallows. Herb-Mercury. Mint. Motherwort. Mugwort. Parsnep. Pennyroyal. Periwinkle. Primrose. Ragwort. Roses. Sow-thistles. Spinage. Tanfie. Wild-Tanfie. Teasles. Violets.

Vervine. Maiden-hair. Coriander. Melilot. Daffadil. Stone-Parsly. Sanders. Satyrion. Wild Time. Musk. Copper. Brafs. Tutia.

VI. To *Mercury*, Calamint. Carrots. Caroways. Chamepitys. Dill. Ferne. Fennel. Hogs-fennel. Germander. Horehound. Haslenut-tree. Liquorice. Sweet Marjoram. Mulberry-tree. Oats. Parsly. Pellitory of the Wall. Sampire. Savory. Smallage. Southernwood. Trefoyle. Valerian. Honey-suckles. Annis. Columbine. Junipertree, Peony. Quick-silver, Marchasie.

VII. To *Luna*, Adders-tongue. Cabbages. Coleworts. Ducks-meat. Waterflags. Lillies. Waterlillies. Flowerdeluce. Fluellin. Lettice. Loostrife. Moonwort. Mouse-ear. Orpine. Poppies. Purslane. Prives. Rattlegrafs. White-Roses. White and Burnet Saxifrage. Wall-flowers. Willowtree. Toad-stools. Water-Plantin. Water-Agrimony. Water-Betony. Turneps. Housleek. Silver. Pearl. Camphir.

CHAP. III.

Of gathering Herbs and Plants.

I. **O**bserve the place where Herbs delight to grow naturally, and gather them there, such as are green, full of juyce, and no way declined.

II. Let the Planet that governs the Herb be *angular*, and *strong*, if possible, or in the Houses they delight in, and let the Moon

Moon apply to his, good Aspect. *If this cannot be.*

III. If you use Medicines of the Lord of the tenth, then let him be in, or apply to the good Aspect of the Lord of the Ascendant at the Decumbiture, or Planet therein, if a Fortune; or contrariwise, if Medicines of the Lord of the Ascendant, let him in like matter be configured with the Lord of the tenth, or Planet therein, if a Fortune. Or,

IV. It may be much more effectual in this case, if the Lords of the Ascendant, or Medium Coels of the Radix, be considered, as those in the Decumbiture. *If this cannot be,*

V. Consider what Planet that is which afflicts the Promissor, or

Author of the Disease, and let the Planet which governs the Herb be in good Aspect with him. Or,

VI. Observe that time in which the said Planet, or the Moon, transits the good Beams of the Lord of the Ascendant, or tenth in the Radix, or other fortunate Planet, or Cusp of the radical Ascendant, or by transit casts his partil Trine thereto. Or,

VII. Wait till the said Planet is joyned to a fixed Star of his own nature: if at that time he be also essentially fortified, angular, and in good Aspect to the Ascendant, tenth, or their Lords, you may do wonders with your Medicine.

CHAP. IV.

Of the Principal Virtues.

I. THE Virtue Procreative is seated in the instruments of Generation, and is under Venus, fortified by her Herbs and Plants; but diminished and cleansed by those of Mars; and extinguished by those of Saturn.

II. The virtue Conservative is either Natural, Vital, or Animal.

III. The Natural virtue resides in the Liver, and is dispersed through the Body by the

Veins, and is under Jupiter, from whence springs Blood, Flegm, Choller, and Melancholly.

IV. Blood is hot and moist, made of food perfectly concocted, and is under Jupiter.

It is increased by his Herbs and Plants; cooled by those of Venus, and the Moon; purged by those of Mars; corrupted by those of Mercury; and destroyed by those of Saturn.

V. Flegm is cold and moist,

made of meat not perfectly digested ; its seat is the Lungs, and is governed by *Venus* and the *Moon*.

It makes the body slippery, qualifies the beat of Choller, and cools and moistens the heart ; it is purged by Herbs of Jupiter, and destroyed by Herbs of Mars.

VI. *Choller* is hot and dry, made of food more than perfectly concocted ; its seat is the Gall, and is under *Mars*.

It heats the Body, comforts the Brain, and purges all the humours ; it is destroyed by Herbs of Luna.

VII. *Melancholy* is cold and dry, burnt choller, or the sediment of Blood ; its seat is the Spleen, and is under *Saturn*.

This strengthens the retentive faculty, fortifies the Memory and abates lust ; it is destroyed by Medicines of Sol and Jupiter.

VIII. The *Vital spirit* resides in the Heart, is dispersed by the Arteries, and is under the *Sun*.

This Mars diminishes, and Saturn destroys : the Herbs of Sol and Jupiter, strongly fortify it.

IX. The *Animal spirit* resides in the Brain, and is governed by *Mercury* and the *Moon*.

The Moon rules the Bulk of the Brain and sensitive part : Mercury the rational : and this is the reason, if in a Nativity the Moon is stronger than Mercury, sense over-

comes reason : but if Mercury be strong, and the Moon weak, reason overcomes sense.

X. The *Animal* virtue is either *Intellective*, or *Sensitive*.

XI. The *Intellective* consists in *Imagination*, *Judgment*, and *Memory*, and is under *Mercury*.

XII. *Imagination* is hot and dry, seated in the forepart of the Brain, and is under *Mercury* : *Judgment* is seated in the middle of the Brain, is hot and moist, approving of what is good, and rejecting what is bad, and is under *Jupiter* : *Memory* is seated in the hinder part of the Brain, is cold and dry, recording things past or to come, and is under *Saturn*.

XIII. The *Sensitive* part of the *Animal* faculty consists in seeing, hearing, smelling, tasting and feeling.

XIV. The *sight* is cold and moist, resides in the eyes in the *Chrystaline* humour, and is under the *Luminaries* : the *hearing* is cold and dry, resides in the ear, and is under *Saturn* and *Mercury* : the *smelling* is hot and dry, resides in the nose, and is under *Mars* : the *taste* is hot and moist, resides in the pallet, and is under *Jupiter* : the *feeling* is hot, cold, moist, and dry, is seated in no particular Organ, but is spread abroad over the whole Body, and is under *Venus*.

CHAP. V.

Of the Administring Virtues.

I. **T**HE Attractive virtue is hot and dry, and is under Mars and the Sun.

Let it be fortified when the Moon is in Aries, Leo, or Sagittary, or when one of those ascend.

It is signified by the Ascendent, its Lord, and Planets therein: if therefore the Lord or the Ascendent be strong and free from affliction it is as it should be: but if Cancer, Scorpio, or Pisces, ascend at the Decumbiture, and Venus or the Moon therein, it is weakened by too much cold and moisture: but Mars and Sol, in Sextile or Trine to it fortifie it. ♀ and ☿ afflict it by too much cold & by too much moisture. It is rectified by such things as purge Flegm and Watery humours. If Taurus, Virgo or Capricorn ascend, it is weakened by too much cold: here Saturn, Mercury, Venus and Luna afflict it: Jupiter and Sol in the Ascendent strengthen it, as also the Sextile or Trine of Mars: it is rectified by purging Melancholy: if Gemini, Libra, or Aquary ascend, it is weakened by too much moisture; here Saturn and Mercury may be profitable: It is rectified by such things as cleanse and purify the Blood: if Aries, Leo or Sagittary, ascend, and ♀ or ☿ be there, it is hurt by too much cold, Venus and Luna debilitate it by too much moisture: Jupiter strengthens it

by his heat, Mars and Sol by their heat and dryness. It is rectified by such things as purge Choller.

II. The Digestive virtue is hot and moist, and is under Jupiter.

In fortifying of it, do it with the Herbs of Jupiter, and let the Moon be in Gemini, Libra or Aquary, or let one of them ascend.

It is signified by the seventh, its Lord and Planets therein, if therefore Gemini, Libra or Aquary descend on the seventh, and are free from affliction, as also the Lord of the seventh, it is strong, and as it ought to be: but if Saturn or Mercury be posited therein, it is weakened by too much cold and dryness, and is rectified by such things as purge Melancholly: Jupiter and Venus fortify it: the Moon hurts it by too much coldness: Mars and Sol by too much dryness; It is rectified by such things as cleanse the Blood. If Cancer, Scorpio or Pisces descend, it is weakened by too much cold: Mars and Sol comfort it by their heat; Saturn and Mars destroy it by their dryness: it is rectified by purging flegm. If Leo, Sagittary or Aries descend, it is weakened by too much dryness, Jupiter and Venus, comfort it by their moisture; Luna destroys it by her coldness: Saturn and Mercury by their cold and dryness. It is rectified by purging

ging Choller. If Virgo, Capricorn or Taurus descends, it is weakened by too much cold and dryness: Luna hurts it by her cold: Saturn and Mercury destroys it: Venus comforts it by her moisture, Jupiter restores it; rectify it by evacuating Melancholly.

III. The Retentive Virtue is cold and dry, and is under Saturn.

Fortifie it with his Herbs, and let the Moon be in Taurus, Virgo or Capricorn, or let one of them ascend.

It is signified by the Medium Cœli, its Lord, and Planets therein. If Taurus, Virgo or Capricorn Culminate, be free from affliction, as also its Lord, it shews the rectitude thereof. Saturn and Mercury only fortifie it; Luna destroys it, Mars hurts it by too much heat, Venus by too much moisture: if Gemini, Libra or Aquary Culminate, it is hurt by heat and moisture, and shews a putrifaction of the Blood, and fermentation thereof, the Bloody flux, violent Fevers, &c. if Cancer, Scorpio or Pisces Culminate it is hurt by too much Moisture, and is rectified by purging of Flegm. If Leo, Sagittary or Aries Culminate, it is hurt by too much heat, and rectified by purging of Choller, &c.

IV. The Expulsive virtue is cold and moist, and under Venus and the Moon.

In fortifying of this let the Moon be in Cancer, Scorpio, or Pisces, or let one of them ascend.

It is signified by the Imum Cœli, its Lord, and Planets therein: if Cancer, Scorpio or Pisces Infirmate, and be free from affliction, as also the Lord of the Imum Cœli, it is as nature requirs it: Luna preserves and fortifies it, Jupiter hurts it by too much heat, Saturn and Mercury by too much dryness: Mars and the Sun destroy it: Venus restores it: if Leo, Sagittary or Aries Infirmate, it is destroyed by heat and dryness, but rectified by purging of Choller: if Virgo, Capricorn, or Taurus Infirmate, it is hurt by too much dryness, here Saturn and Mercury are Inimical by a passive property, Mars and Sol by an Active: Luna and Venus relieves it; it is rectified by purging Melancholly. If Libra, Aquary or Gemini Infirmate, it is hurt by too much heat: here Jupiter, Mars, Sol and Venus hurt by too much heat: Saturn, Mars, Sol and Mercury by too much dryness: The Sun and Moon restore it: it is rectified by cleansing and purging of the Blood.

CHAP. VI.

Of the time of Purging.

I. **L**ET not the *Moon* be in *Aries*, *Taurus* or *Capricorn*, or joyned to a Planet that is Retrograde ; for that faith *Hermes*, causeth Vomiting.

II. Let not the *Moon* be in Aspect with *Saturn* nor *Mars*: for *Saturn*, through his cold, thickens the humours, stops the pores, and hindreth the operation : *Mars* through his heat often sharpens the humour, to the drawing of blood, if the Medicine be strong.

III. The *Moon* in *Cancer*, *Scorpio*, or *Pisces*, and the Lord of the Ascendent in good Aspect with a Planet under the Earth, is a good time to purge in ; but joyned to a Planet above the Earth, especially in the tenth, endangers vomiting.

IV. To purge the *Spleen*, let *Jupiter* be strong, fortified, and well disposed, and let *Saturn* be weak.

V. To purge the *Liver*, let *Saturn* be fortified, and *Jupiter* weak.

VI. It is evil to purge, when *Sol* is in the Ascendent, tenth, or seventh Houses : but then it is good to take cordial Medicines.

VII. Purge the *Lungs*, when *Jupiter* is weak ; the *Gall*, when *Mars* is weak ; the Instruments of Generation, when *Venus* is

weak ; the Brain when the *Moon* is weak.

VIII. Administer no purgation when *Leo* ascends, lest it cause vomit.

IX. *Ptolomy* saith, That from the New *Moon* to the First Quarter, and from the Full to the Last Quarter, the humours move from the inward parts to the outward ; and therefore then it will be best to take sweating Medicines : and from the First Quarter to the Full, and from the Last to the Change, they move from the outward parts inward ; and therefore then it may be the better purging.

X. But in all these respects you must see of what Houses every Planet was Lord of in the *Radix*, and in what House posited, for accordingly it may be either profitable or dangerous.

XI. The *Moon* in *Cancer*, in Sextile or Trine with *Venus* not combust, purge Choller, with *Sol*, purge Flegm ; with *Jupiter*, Melancholly, and that with Elixirs.

XII. The *Moon* in *Scorpio* in Sextile or Trine with *Venus* not Combust, purge Choller, with *Sol*, purge Flegm ; with *Jupiter*, purge Melancholly, and that with Potions.

XIII. The *Moon* in *Pisces*, in Sext-

Sextile or Trine with *Venus* not Combust, purge Choller : with *Sol*, purge Flegm : with *Jupiter*, purge Melancholly, and that with Pills.

XIV. Avoid the *Moons* Position in a fixed sign, for that

makes the Physick work much the less.

XV. In purging it will also be good (if it may be) that the *Moon* and Lord of the Ascendent descend and be under the Earth.

CHAP. VII.

Of other Physical Administrations.

I. **L**ET the humours be prepared for purgation, when the *Moon* is in *Gemini*, *Libra*, or *Aquarius*, (because they are aereal Signs, in which the humors come to be rarified and made thin) and let the Lord of the Ascendent be free from affliction.

II. In provoking vomit, let the Ascendent, its Lord, and the *Moon*, be in *Aries*, *Taurus*, or *Capricorn* : as also let the *Moon* and Lord of the Ascendent, ascend and be above the Earth.

III. Purge by sneezing, when the *Moon* is in *Cancer*, *Leo* or *Virgo*.

IV. Take Glysters when the *Moon* is in *Aries*, *Libra*, or *Scorpio*.

V. Take Gargarisms when the *Moon* is in *Cancer* or *Artes*.

VI. Stop Rheums and Fluxes when the *Moon* is in *Taurus*, *Virgo*, or *Capricorn*, and in Aspect with *Saturn*, especially also in an Earthly Sign.

VII. Bath for cold Diseases when the *Moon* is in *Aries*,

Leo, or *Sagitary*, and joynd in good Aspect to *Jupiter*, *Mars* or *Sol*.

VIII. Bath for hot Diseases, the *Moon* in *Cancer*, *Scorpio*, or *Pisces*, in good Aspect with *Saturn*, *Venus* or *Mercury*.

IX. In bathing also let this rule be observed, that the *Moon* be in a Sign contrary to the nature of the Disease.

X. Sweat when the *Moon* is in *Aries*, *Leo* or *Sagitary* or in an aereal Sign, being two or three days after the Change, or at the Full.

XI. Sweat at such time as the *Sun* is below the Horizon, after the sick hath taken some comfortable Cordial of the nature of *Jupiter* and *Sol*.

Where note, that if the Body be dry and lean, a little sweat may serve : but if fat, they may sweat well.

XII. In purging by Urine, let the *Moon* be in *Libra* or *Scorpio*, in good Aspect with *Sol* or *Mars*, in the descending part of Heaven.

CHAP. VIII.

Of Phlebotomy, or Blood-letting.

I. **A**S it is inconvenient either for a lean and weak man, or for a gross and fat man, to be let blood; so neither ought a child under 14 years of age to bleed, nor an aged person above 56.

II. That as in the extremity of heat and cold, as in Summer and Winter, it is not convenient to be let Blood: so likewise custom ought to be considered: that they that do not use it, may avoid it, unless necessity urge it, lest it should breed a farther inconvenience.

III. That blood-letting is not to be used when the Moon is in *Gemini* or *Leo*, or Sign ruling the member cut.

IV. Let the *Sanguine* blood, the Moon in *Taurus*, *Virgo*, or *Capricorn*: the *Chollerick*, the Moon in *Cancer*, *Scorpio*, or *Pisces*: the *Flegmatick*, the Moon in *Aries* or *Sagitary*: the *Melanchollick*, the Moon in *Libra*, or *Aquary*.

V. Let blood in *Youth*, from the Change to the First Quarter: in *middle age*, from the First Quarter to the Full; in *elder age*, from the Full to the

Last Quarter: in *old age*, from the Last Quarter to the Change.

VI. The Moon in Conjunction or Opposition with *Saturn*, *Jupiter*, *Mars*, *Sol*, *Venus*, *Mercury*, or with *Caput Draconis* or *Cauda Draconis*, forbids the opening of a vein both 2 day before and a day after; but more especially if *Venus* and *Mercury* be Combust.

VII. The Moon in Square of *Saturn*, *Mars* or *Sol*, forbiddeth blood-letting six hours both before and after.

VIII. *Luna* in Conjunction, Sextile, Quartile, or Trine with *Jupiter* or *Venus* not Combust: or in Sextile or Trine with *Saturn*, *Mars*, or *Sol*, and the in a good Sign, giveth a good time for blood-letting.

IX. Whatsoever we have said of *Phlebotomy*, apply the same to *Ventoses*.

X. Lastly, in a *Pleurisie*, *Quensie*, *Phrensie*, *Apoplexy*, *Cephelexa*, *Pestilence*, *Feaver causos*, and obstruction of the Terms, you may let Blood, not waiting for an elect time, lest farther mischiefs ensue.

CHAP. IX.

Therapeutical observations in general.

I. IF the Lord of the tenth, or Planet upon the Cusp of the tenth, be strong, and in good Aspect with the Ascendent, or its Lord, use those Medicines under the government of that Planet.

II. Fortifie the Body with Medicines of the nature of the Lord of the Ascendent, whether he be a fortune; or an infortune.

III. Let the Medicine be Sympathetical with the Sign ascending: but Antipathetical to the Lord of the sixth or twelfth.

IV. If the Lord of the twelfth be Lord of the Ascendent, make use of the Medicines of the light of time.

V. Fortifie the part affected by Sympathetical remedies.

VI. In all cases, with Solar

Medicaments fortifie the Heart; lest if that go to decay, the whole Fabrick should fall to the ground.

VII. As the *Ascendent* is for the Sick, so the *seventh* House is for the Physician, and the *tenth* for the Medicine; and so accordingly as their Lords are configurated with the Lord of the Ascendent, the honesty of the Physician, and goodness of his Medicaments may be estimated.

VIII. In curing or comforting any afflicted Member, let the Sign signifying it, be free from affliction, to wit the presence or beams of evil Planets, and the Moon in like manner free from any impediment, but if possible applying to the Benign Beams of a Fortune, Lord of the Ascendent or Medium Cœli.

CHAP. X.

The time of Administration, from Affections of the Decumbiture.

I. **L**ET the true time of the Significators coming to the good Aspect, to wit, of the Lord of the Ascendent, and Lord of the tenth, or body of any eminent fixed Star, or good Aspect of a Fortune, or Planet upon the Cusp of the tenth, be observed: as also the Transits of the Lord of the Ascendent, or tenth, or Planets posited upon their Cusps, by the places or good Aspect of one another, or of a fortune.

II. And at what time soever these good Aspects or transits shall happen, it will be good to administer Medicine without delay: letting it be much of the nature of the Promissor, or Planer shewing good.

III. Observe all the times of the evil transits, and evil Aspect, and with much care, avoid the giving Physick at such a time.

IV. If you cannot wait the aforesaid time, observe when the radical Lord of the tenth either transits the Cusp ascending in the Decumbiture, or body or good Aspect of the Lord of the Ascendent; or otherwise applies to the good Aspect of the Lord of the Ascendent, and then

give those things of the nature of the Lord of the tenth.

V. Observe in the Decumbiture, when the Moon or other light Planet, transits the light of the Lord of the seventh or tenth, or Planets therein, by good Aspect, to the Lord of the Ascendent, for that is a proper time of Administration.

VI. There can be no better time, than when the Moon, having last translated by good Aspect the light of the Lord of the tenth, to the Lord of the seventh, shall then immediately apply by good Aspect to the Lord of the Ascendent.

VII. Observe at what time the Lord of the sixth or twelfth is afflicted by a strong and weighty Planet, then (especially if he be Lord of the seventh, ninth, or tenth) administer your Medicine, for you need not doubt of good success.

VIII. Observe in what House of Heaven they make their Aspect or Transit: if in Angles, you may give nimble purging Physick: if in Succedents, more slow and weak; if in Cadents, purge not at all, rather strengthen.

IX. Consider the Sign, in which

which the Aspect or Transit happens ; if in movable Signs, let the Medicine be in a liquid

form ; if in common Signs ; like an Electuary ; if in fixed Signs, in Pills or Troches.

CHAP. XI.

Affections of the Radix considered.

I. **W**HEN the Moon translates, by good Aspect, the light of the Lord of the tenth to the Lord of the Ascendent, or applies to the Trine of its Cusp, it is a good time to administer.

II. It is also a good time, when the Lord of the Ascendent transits the Cusp of the tenth, or body of its Lord ; or

Lord of the tenth, the Cusp of the Ascendent.

III. When the Lords of the sixth and twelfth afflict one another by Aspect or Transit, the Disease weakens, and the Physician may happily become a friend to nature.

IV. Observe if there be any good Direction of the Ascendent or its Lord to the Body, good Aspect, or *Aniscon* of a Fortune, or Lord of the tenth, or Body of a benevolent fixed Star ; or of any of them to the Ascendent, it is a real good time to administer Medicine in.

V. Observe also *all the Transits by the bodies or Aspects of good*

or evil Significators, and in what House and Sign they happen : and upon the time of good Transits, administer your Medicine : upon the time of the evil forbear.

VI. But let this be a general rule, in the worst of times, that with Cordials you fortifie the Heart, (*by the Sect. 6. Cap. 9. Of this Book.*) for a Cordial, with safety may be given at all times, but more especially in those times when there is most need thereof.

VII. Consider also in the *Ephemerides* when those radical Significators, or lights of time, come to the good Aspects of one another : or the Significators of evil are afflicted, and take that advantage to combat with the Disease.

VIII. Consider in what House and Sign the Direction happen : if it be in Sextile or Trine to the Ascendent, the Medicine will act on natures behalf beyond expectation.

C H A P. XII.

Affections of the Exortum considered.

I. Consider if the Disease proceeds from any thing signified in the Exortum, and if so, from thence also you shall have the significations of a remedy.

II. If it comes from the affliction of the Exortive Ascendent, or its Lord, or Planet therein, by Aspect, Transit, or Direction: from the tenth of the Exortum, seek your remedy.

III. The times of Administration, in this case, are to be observed in like manner as in the Radix; to wit at the time of the Exortive Significators approach either by Aspect, Transit, or Direction, to any benevolent configuration of a good Promisor.

IV. But if you cannot wait any of those times, then see when any of the Significators of life in the Radix, by Aspect, Transit, or Direction, come to a benevolent configuration of the Lord of the tenth, Planets

therein posited, or other benevolent in the Exortum; or otherwise, when any of the Significators of Life in the Exortum, come to the same of the Lord of the tenth of the Radix, or Planet therein posited, and at that time administer your Medicine.

V. The Significators of life either in the Radix, or Exortum, coming to the Sextile or Trine of the Radical or exortive Sol or Luna, either by Transit or Direction, shew a very proper time of Administration.

Thus have we in these three last Chapters compleatly delivered the method of the Astrological Therapeuticks, never written on, before by any man: from whence it may evidently appear, how necessary the knowledge of Astrology is, in the Administration of Medicine, the Ignorance of which in a Physician is to be discommended.

C H A P. XIII.

Of the general Precepts of Curing.

I. **H**E that will exactly observe a right Method of Curing, ought to begin at the first Indications, and then come to those which follow after.

II. But above all things, you ought to consider the strength of the Sick, that it may be preserved; then consult the Cure of the Disease.

For if in the Ablation of the Disease, there be not a conservation and reparation of the strength, the Sick may dye in the midst of his Cure.

III. The strength is maintained by Sympathy, or its like; the Disease is taken away by Antipathy, or its opposite.

IV. In all Diseases where the efficient cause is yet present, begin the cure at the same.

For it is impossible to cure perfectly any disease, while the efficient cause is present, which generally proceeds of evil humours lurking in the Body.

V. After the ablation of the cause, then turn you to the Disease ingendred of the cause; always observing this general rule, 1. The ablation of the efficient cause; 2. Of the malady.

VI. After the Disease, comes the cure of the Symptom: but when the Symptom threatens death, or greater danger than

the Disease, the cure of it is first to be attempted.

VII. While the Disease encreases hinder it, and take away that which is ingendred: The generation of that which is to come, is hindred by taking away the antecedent cause; the malady present, by taking away the conjoynd cause; at *Sect. 28, 29, 30, 31. Cap. 43. lib. I. and Sect. I. cap. 44. lib. I.*

VIII. In all Diseases of Fluxion, stop that which floweth; then draw forth the matter already which is flowed: And therefore Diseases of Fluxion, (as Phlegmons, Catarrhs, &c.) look but at the two aforesaid intentions.

IX. In Complicate Diseases, the one of which cannot be cured without the other, you must respect order; which requirerh the Cure of that first, which hindreth the cure of the other.

Ex. gr. If a Phlegmon be complicate with an Ulcer: first repel the one, then cicatrize the other.

X. If two Indications are directly opposite one to another, regard not the one so as to neglect the other.

Ex. gr. If one be troubled by two contrary diseases, so that the one requires a hot remedy, the other a cold: it is then good to use

use one Temperate, that you may harm neither, but help both, as if the Stomach be cold, and the Liver hot. And from hence in a Pblegmon increasing, there is mixed Repercussives with Digestives.

XI. And in this case, you must have greatest respect to the most important and dangerous Indications first, whether they respect the strength, the cause, or the Disease.

XII. But it is a necessary Maxim, that the indisposition be first helped, as excessive Watchings, cruel pain, immoderate evacuations, suppression of superfluities, and other things which weakens nature, and augment the Disease.

In this case, if these Symptomes be extream, the Physician is often constrained to quit the cure of the Disease, to abate them.

XIII. The general method of applying Medicines, is chiefly considered in the quality, quantity, manner, and time of using them.

XIV. The remedy must be contrary in quality to the Disease, (*contraria contrariis curantur*) but sympathizing with the part afflicted.

Hence it follows that that which is out of measure must be brought to its just equality, by its contrary, in like degree out of measure: and so diseases of repletion are cured by evacuation, and contrariwise.

XV. The temper of the sick body, shews the degree of contrariety.

It is not enough to apply a cold thing to a hot Disease: but so,

that it may exceed a temperate, so much as the Disease exceedeth in heat, which the wise Physician will easily discern.

XVI. The quantity of every Medicine is to be considered according to its temperature or quality, the way of its using, the complexion of the Sick, and the greatness of the Sickness.

XVII. Contrary remedies must be put in use by little and little.

For it is dangerous to evacuate all at once, or yet to fill; to heat, or to cool; or to use any other change or alteration whatsoever of a sudden, although from bad to good, for nature abhorres all sudden motions.

XVIII. In the beginning of a Disease, remove that which ought to be removed; but in the height thereof, let it alone: for remedies may be used when the accidents are weak, (as at the beginning and end of the sickness) rather than when they are strong, which is in the height of the sickness.

For in the height, nature is wholly employed about the concoction and excretion of the humour peccant, and therefore ought not to be diverted, nor is it then a fit time to use evacuation.

XIX. If the kind or quality of the Disease be obscure, do not hastily use Medicines; rather let nature work, and a good diet.

An uncertain remedy is dangerous: if therefore you must use one, let it be harmless, that, if it be

not profitable, it may not prove hurtfull.

XX. A simple cure is enough for a Simple Disease: a complicate cure, for a complicate.

XXI. To accomplish the cure, it remains that (as well as the Physician performs his duty) so the sick, and their attendants do theirs.

XXII. That Medicament which is proper for the Disease, if it doth not presently answer Expectation, is not yet to be thrown by, so long as other evil Symptomes do not follow; for by degrees (although insensibly) it may at last expel the Malady.

XXIII. Lastly, there are three sorts of wayes by which Diseases are cured, to wit, by Diet, by Chyrurgery, and by Pharmacy.

Of all which we shall treat particularly in what follows.

II. Of Cure by Diet.

XXIV. It is needful that the Diet be familiar to nature, but opposite to the Disease.

Wholsome Diet is that which strengthens nature, but opposite to the Disease, as hot Meats to cold Diseases, dry Meats to moist Diseases, & contrā: wherefore it is good to order a strait Diet to fat st people.

XXV. Diet more pleasant in taste but less profitable, is to be preferred before that which is more profitable and less pleasant.

For Meats must sometimes be permitted (which are not best) to

gratify the Stomach, lest it cause vomiting and inflations, especially if they be not very hurtfull; for the stomach digests that better, which it takes willingly, than that which it loaths.

XXVI. In this therefore respect Custome, for things long accustomed to, (although worse) generally hurts less, than those which have not been often in use.

XXVII. In the height of the Disease use a very slender and spare Diet; for nature ought not to be hindered in her concoction of humours, by concoction of the Food.

An acute Disease comes to its height in the first four days, or little more, and is known by its violence, extremity, quickness, and sharp pains.

XXVIII. If the height be long in coming, a more large Diet may be used, till a little before the approaching of the height.

XXIX. Slender and small Diet is dangerous in long Diseases, because it weakens nature, which ought to be preserved in its strength, to the end, that it may be able to overcome the Disease.

XXX. When the Body is not clean, the more you nourish it, the more you hurt it: for it is more needful to evacuate the evil humours, than of nourishment.

For evil humours spoil the food, so that the Cacochymy is augmented double, even as if fair water should be mixed with muddy, it becomes all muddy; so the meat

re-

received becomes wholly corrupt ; but this is chiefly when the Stomach is foul.

XXXI. A larger Diet must be given to children than to aged people ; and a mean to those of middle age.

For Children are growing, and have much natural heat ; in age there is a declension of both, which too much food (not being concocted) would choke.

XXXII. The Stomach and inward parts are hotter in the Winter and Spring time, (than in the Summer or Autumn) and therefore a larger quantity of food may be received, because by reason of the Heat, it will be the easier concocted.

For the coldness of the Air drives the natural heat inwards in Winter, as in the Summer it attracts it outwards, leaving the inwards the more cold : every like cleaves to its like.

XXXIII. Therefore in Summer and Harvest eat the less, but the oftner : in the Winter and Spring more abundantly, but seldom.

For the Stomach (by its more coldness) with more difficulty digests its food in hot weather.

XXXIV. Nourish and restore by little and little those that have been weakened of a long time ; but quickly restore those that have been suddenly taken down.

XXXV. Lastly, Give food to the Sick in the intermission of the Disease : but abstain during the access ; for then it hinders nature from digestion of the humour, to concoct the Nutriment,

thereby encreasing the Disease

III. Of Cure by Chyrurgery.

XXXVI. Of all the operations of Chyrurgery, Phlebotomy or Blood-letting hath the pre-cedency, it being the universal way to take away Diseases of plenitude.

XXXVII. It is also an operation revulsive and derivative : as in turning the course of a Flux aside, or to the opposite parts.

XXXVIII. In hot Feavers, (if there be much strength) Blood may be taken away, as also in great Inflammations, and extreme pains : for thereby the vessels are emptied, the Body cooled, the heat extinguished, and sometimes a Flux of the Belly, by which the sick is cured.

XXXIX. If strength permits to draw much Blood, it is good to do it by little and little, and at divers times ; for all evacuations are dangerous, but chiefly bleeding.

XL. Where Bleeding and Purging is necessary, it is best done in the Spring ; for then there is no great heat, to weaken the Body by Exhalation ; nor great cold, to make it stiff by congealing the humours.

XLI. Do not without great cause open a vein to a Woman with Child, least abortion follow, (if her Child be great) by depriving it of its nourishment.

XLII. But if there be an extreme plenitude, then you need

not so much fear, but contrariwise, you may to do it, least by the too great abundance of Blood, the Child in the Womb be suffocated.

XLIII. There are five principal causes for which Blood may be taken away, to wit, 1. In an extream Hemorrhage. 2. In a true Quinsie. 3. In a Pleurisie. 4. In a violent Feaver, having no Critical Symptoms. 5. In the Obstruction of the Terms in Women.

XLIV. In great defluxions in the Eyes, the Saxon may be profitably applyed to the Nape of the Neck.

XLV. In other defluxions, and *Cacochymick* persons, and Diseases thence proceeding, it will be found very profitable to undergoe the trouble of a Fontanel or Issue in some convenient part of the Body.

IV. Of Cure by Pharmacy.

XLVI. Purgative Medicaments are ordained for *Cacochymick* Diseases : those that purge Flegm to flegmatick ; Choller to the Cholerick : Melancholly to the melancholick ; and the cure of a *Cacochymy* is made by a purgation, particularly appropriate to the humour which exceeds.

XLVII. Among the alterative Medicaments, the cold are appointed for the hot, the dry for the moist. & *contrà*.

XLVIII. Strong Medicine are to be given to strong Diseases, gentle, to mild Diseases.

XLIX. Those things which are to be expelled, must be done that way whither nature chiefly tends, and they ought to be diverted if they take the way they ought not.

L. So if flegmatick or melancholick humours tend downwards naturally, the Physician ought to prescribe a Clyster, or other proper remedy to excite nature ; but if upwards, and nature would expel it at the mouth, a vomit is then good.

LI. Who so doth otherwise, shall change the order and course of nature, and thereby abate the strength, and put the Sick in apparent danger.

LII. In very sharp Diseases, purge the same day if the humour be moved ; for, saith *Hippocrates*, it is not then good to slip the time, lest the evil grow, nature becomes weaker, and the wandring humours seize on some noble part.

LIII. But if the humours be not moved, be well advised before you purge, at such a time, and in such a sharp Disease.

LIV. When you go about to purge the Body, prepare it before hand, that the humours may be moving and fluid ; otherwise the purgation will be with great pain and difficulty, gnawing the Belly, illness of the Stomach, fainting of the Heart, debility of the Pulse, cold sweats, and decay of strength.

LV. The humours are made Fluxil by open Medicaments, given chiefly over Night, by which the passages of the Body are opened.

pened and the gross matter made thin.

LVI. Do not purge raw and undigested humours, no not in the beginning of a Disease, except they be moved and have no fixed place.

For undigested humours are slow to be moved, by reason of their viscosity and grossness, and so stop the passages that go from the extremities of the body to the belly, thereby causing other ill Symptoms to arise.

LVII. Purge Women with Child (if the matter be moved) betwixt the fourth and seventh month, but sooner or later is to be feared.

For presently after Conception, if they leap, fall, or move violently, (either spirit or body) the Conception easily falleth forth, till such time as the Child is fastned in the Womb; and so it is when the Child is great, by reason of its weight: but in the mid term they cleave faster to the matrix, and therefore then they may the better be purged.

LVIII. The Epigastre or lower part of the Belly being much extenuated or thinned, in such persons it is dangerous to give purgations by stool.

LIX. If the Crise be now, or hath lately been, and the humours be expelled, move, purge, change nor alter any thing, by Physick, nor any other way, which may disturbe nature, but suffer her to have her course.

For seeing the Crisis is a work of nature, and not of the Physician, he ought not to disturb her, but to let her perfect her work.

LX. But if the Crisis hath not been firm, then the Physician afterwards ought to purge out that which remains of the evil humors, left by process of time, putrifying in the Body, they bring the Sick into a Relapse.

LXI. Lastly, If a d^{fluxion} be on any part, you must repell it: In the beginning it is good to do it with reper^{cussives}, because they fortify the part afflicted, and destroy even the most subtil part of that which is already there.

Hitherto of Medicinal precepts, a Word or two of Chyrurgical Operations, which are principally six, viz. Synthesis, Diæresis, Exæresis, Aphæresis, Prothesis, and Diarrhosis. To which add Polin^{ctation} or Embalming,

CHAP. XIV.

of SYNTHESIS.

I. *Synthesis* or *Unition* is that which teaches how to unite parts disjoyned, and it is twofold. 1. What regards the hard and bony parts. 2. What regards the soft and fleshy parts.

II. *The Unition of Bones* is either the *Setting* of Broken Bones, or the *reduction* of Bones out of Joynt: the first is called a *Fracture*, the other a *dislocation*.

III. In *Setting* of a broken bone, there is *Extention*, *Conjoyning*, *Ligature*, and *Well placing*.

IV. *Extention* is an Operation performed with pain; which being done aright, must be greater or lesser according to the time of the *Fracture*, age of the Patient and Magnitude of the Bone. A New *Fracture*, tender or young Patient, and a Small Bone, require a gentler *Extention*, an Old *Fracture*, strong Patient, and a big Bone a greater.

V. *Conjoyning the Bones* is the next Operation; in doing of which, be cautious lest the *Muscles* be wrested from their natural position and figure: It is well done, if the Bone be any thing firm, and all the places about the fracture be found equal.

VI. *Ligature* is done with a double Rowler: the first is to be thrice rowled about the Fracture, and then upwards. The Second (which must be twice as Long,) is to be Once Wound about the Fracture, proceeding downwards, and then upwards again, a little higher then the first Rowler: to which you may add convenient splints (of Wood or Past board) round about the Member.

Let not the bandage be too straight lest it cause pain or endanger a Gangreen, by robbing the part of its Nourishment: nor too loose, lest the Bones slip out of their places: this you will find to be well done, if the Patient soon after he is dressed finds his pain abated, and on or after the third day, the ligatures seem loose, and the place a little below the bending be a little swelled.

VII. *Well placing* is the last of the prescribed Operations, which ought to be softly, evenly, and a little raised; if you lay it too low, the Bone will bend outwards, if too high, it will bend inwards: This you will find to be well done, if in the Second dressing you find all even.

VIII. Before you rowl the Ligature about the Member, bath the Part with S.V. or with

Oyl

Oyl S.V. and Vinegar mixt together: or Lay *Oxycroceum*, *Opodeldoch*, *Catagmaticum*, upon it; or a Cataplasm of fine *Bole*, *Wheat Meal*, *Whites of Eggs*, and a little *Camphir*; which let goe round the part, and about three Inches below the Fracture.

IX. If there is an Inflammation in the Fracture, before extention foment it with an Emollient Oyl: or lay the part in warm Cow dung, which will digest and ease pain.

For the Medicinal Cure, see Chap. 27. following.

X. In Dislocations or Bones out of Joynt, you make the reduction; by those four manual operations used in Fractures, which you must perform either by Hand or Instrument, as the nature of the part affected will declare to you.

XI. Extention must be made so great, that there may be a Cavity between the Bones disjoynted, to the end that in Setting, the one may not rub against the other, whence oftentimes arises extream and sometimes incurable Accidents. In the Conjoyning you must be carefull not to wrest the Bones or Muscles, but that they may keep their natural Figure. Before binding up, be sure to preserve the part from Inflammation and Flux of humours by applying *Emplastrum Metroproptoticon*, *Gummofum Paracelsi*, or ad *Herniam Schroderi*.

XII. If the Dislocation is accompanied with Inflammation at first, beware of Extending the Part, or making any Progress to

the reduction before that be removed, which you must first do with Emollients, as *Balsamum Vulnerarum Samaritanum*, *Ung. de Albæ Compositum* or *Laurinum Vulgare*, and then with Discutients as *Emplastrum de Minio Simplex*, *de Mastiche*, or *de Lapide Calaminare*.

XIII. The hard and Bony parts being handled, we now come to the more soft and fleshy, of which a Rupture falls first into consideration, especially that which is a Rupture of the *Peritonæum*, wherein the Intestines fall into the Cods.

XIV. In this Case you must lay the Patient on his Back, with his Leggs elevated, and a little opened, by which the Cawl of the Intestines may return of its own accord, or otherwise be preest up gently with your Fingers: But if through hardned Excrements, or Wind, you cannot do this, you must first exhibit *Enema ad Iliacam Passionem Mynsichti* (See Our Pharmacopæia, lib. 5. cap. 8. Sect. 5.) once or twice, giving mean season *Diacassia* with *Manna* ℥jss or ℥ij: Bath the Bowels for half an hour with Oyl of *Roses*, applying over the Bowels and Tumor *Cataplasmata Resolutivum Foresti* (*Pharmac. lib. 5. cap. 7. Sect. II.*) this done after some twelve hours, attempt the reducing of it: which being done, with convenient Bands or Trusses, keep the Bowels so long up, till the broken *Peritonæum* be firmly knit together, or conjoynted to the Muscles of the Belly; that nothing may fall out any more.

XV. For

XV. For this purpose you must apply over the Rupture, *Empl. ad Herniam*, or *Catagmaticum*, first or second, or *ad Herniam Scroderi*, or *ad Herniam Nostrum*, removing and applying a new Plaster once a week, or when it ceases sticking. Inwardly let the Patient take Blood of Comfrey, morning, noon and night, in a glass of good *Alicant*, or *Balsam of Sal Gem*, Powder of *Parshy seeds*, shell or black field Snails, or Rupture-wort. To this purpose also a continual Diet of *Gelly of Hogs, Calves or Neats Feet*, made strong, sweetned with Sugar, and aromatized with Cinnamon is inferior to no one thing yet known. Let the sick eat Bread well Baked with Annise, Fennel or Carraway seeds, his food, light, meat Roasted, and let his drink be *Alicant*, Red wine, Tent, or some such astringent Liquor, let his dyet be slender and sparing, keep his bed during the Cure, and if it be an old Rupture, lye on his back, for the space of forty days. If his Belly should be bound, give him new damask Prunes raw, taking once a week, the *Angelick Pills of Grulingius*. After forty days are past, let the Patient rise, yet continuing his Plaster and Truss, for at least 60 days longer.

XVI. If by a Wound the *Cawl* or *Intestins* come out, reduce them before the natural heat is exhausted, if you intend to preserve Life: if the Bowels themselves be wounded, stitch the Lips together with a waxed thrid, and gently return them into the Body: so also the *Omentum*

being slipt out, unless it has lost its natural colour and heat; in which case tye it in the place which is sound, cutting off the part which is putrid, then reduce it into the Belly, leaving the thread hanging out of the Wound that being suppurated, it may be drawn out without trouble.

XVII. This being done, stitch together the Wound and *Peritoneum*, thus: Thrust a needle with a waxed thread, from without, through the skin and Muscles, into the very *peritoneum*, leaving it on this side untoucht, but laying hold on the other side: pierce it through, and the Muscles and skin also; draw the lips together; and passing over the space of an Inch, put in the Needle on the same side again, on which it was drawn out last, leaving again the *Peritoneum*, on the same side, untoucht; but holding it on the other side, thrust it through the skin and Muscles, and so onwards: now by reason of the motion of the Belly; and haste here used the stitches may easily be undon, you must always apply over the Wound a sticking Emplaster.

XVIII. *Exomphalos seu Hernia Umbelicalis*, a Rupture of the Navel: It may be, 1. *From Blood*, *Aneurisma*; 2. *From Fleß*, which is hard. 3. *From the Caul*, where the Tumor is soft. 4. *From the Guts*, which is unequal. The two first admit no Cure: the latter two must be reduced, by laying the Patient backwards, and proceeding as at *Seck. 14.*

XIX. You must here observe, that in old Ruptures, and Aged

People, the edges of the broken *peritonæum*, are sometimes *Callous*, so that although they be never so well brought together yet they will never unite: In this case you must do what you can with bands: the contrary you shall observe in young children, where by reason of their easy union, *Trusses* are much the better.

XX. *The too farr strutting out of the Eye* (if it cannot be reduced is to be removed, otherwise) it is to be gently put into its place, then to be kept in by a fit bandage, having applied a fit Baulster, dipt in *Aqua Ophthalmica nostra* (see Our *Pharmacopœia*, Lib. 5. Cap. 1. Sect. 14.) and a defensative to the forehead. some report that an Eye hanging out of its *Orbit*, the breadth of a Finger, may be reduced without offence to the sight. For a defensative, you may use *Mynsicht's Cataplasme of a Swallows Nest*: after the removing of the Bandage, or opening of it, drop our aforesaid Water into the Eye.

XXI. *Prolapsus seu procidentia Uteri*, The falling out of the Womb. To reduce it, lay the Patient on her back, her knees high, and legs asunder, and so if possible, put it up gently with your hand; if it be tumified or inflamed, so as it will not go up, follow our directions for a Rupture, Sect. 14. Then reduce it;

putting up a pessary, that may in bigness and proportion answer the end; make it with Cork, which cover with Wax, mixed with a little *Castoreum* and *Assafœtida*: let it not be too thick, but perforated long ways for the humor to pass through; this continue there, and let it be kept with a fitting Bandage, applying over the Belly *Emplastrum ad Herniam, Catagmaticum*, or that of *Schroder*: let the Patient be still for ten or twelve days, with her legs a cross, forbear loud speaking, and as much as may be coughing or sneezing, or whatever may occasion violent expulsion. Inwardly observe the method in Ruptures, except in the time of the Courses.

XXII. *Procidentia Ani*, The falling out of the Fundament, or Arse-gut; caused through too much straining and looseness of the *Sphincter Muscle*, is thus cured. If there be pain, tumor and Inflammation, follow the advice given in Ruptures: or foment the part with Quintessence of Camomil, p. i. mixt with Oyl of Roses, p. iij. then reduce it with your Fingers, anointing it first with Oyl of Myrtles, strewing it over with astringent *Crocus Martis*: beware of External cold, least a Gangreen, and from thence *Deathensue*, therefore do your utmost to put it up with what speed may be.

CHAP. XV. Of DIÆRESIS.

I. **D**iæresis is the dividing or separating of parts unnaturally joyned by manual Operations.

It reaches the opening of Veines, Arteries, Wind Pipe, Breast, closed Orifices, Ustion, making Issues, the Seton Paracentesis, scarification, opening Apostemes, dividing of Bones by perforation, excision or scraping, filing and sawing, and the application of Cups or Cupping.

II. The way and manner of opening a Vein. Make a Ligature about the Arm, about two Inches above the place you intend to cut, of a Womans Fillet, or the like, so as it may be easily loosed, if need be; then put a thick staff into the Patients hand to gripe fast, and with your hand, chafe well the Vein, that it may rise full. If it lyes deep and small, foment it with warm water, rubbing it hard with a Linnen Cloth, till it sufficiently appears: make the Orifice large, not deep; if it be too small, it will soon puff up with Wind. Strike the Vein, (not just along, nor quite over-thwart, but slanting. If it be not deep enough at first, quickly thrust into the same place again deeper; but before you cut it, lay your thumb gently upon the Vein, just by the place, and with the Lancet, between the finger and thumb, in the other hand. (the other fingers leaning upon the Arm, to keep your hand the more steadier) gently thrust in the Lancet, as

far as you may think may reach the Vein, a little stretching up your hand, by which you shall enlarge the Orifice. Bleed as much as may be convenient; then by loosing of the Ligature, the Blood will stay. With your finger squeeze the thickened Blood out of the Orifice, lay on a pledget of Lint, dipt in cold water, and a Linnen Cloth, two or three times double upon that; (which ought to be in a readines before hand) then with a band or Ligature, bind up the Arm, going cross above and below the Elbow, making the band to cross upon the Boulster: then pin or tye it fast; so as the Patient may endure it, which ler remain till the next day, letting the Arm be held up, or with a linnen Cloth be fastned to the Brest. *The Reasons requiring or forbiding this Operation, remains to be enquired into, for the discussing of which, we lay down the following Propositions.*

Prop. 1.

III. That the Blood is the Life, or that which is the Vehiculum of Life, and through whose Assistance Nature performs all her Operations.

Prop. 2.

IV. That as the Blood is an Instrument of Nature. so is it also the product of Nature.

This is evident by the Comparison of Childhood and Maturity together: a child has not so much Blood

Blood as a man, therefore it is necessary, it should have its generation or augmentation, which can only be by what it had a beginning.

Prop. 3.

V. Nature Generates or Augments not the Quantity of the Blood in Vain.

This is apparent, because even all Philosophy maintaines that she does none of her Works in vain, but for an end of Health and conservation.

Prop. 4.

VI. That the diminution of that which Nature has ordeined for a Conservation must produce a Chasm or Gap in the matter to be conserved.

You may prove this in any continued matter whether lines superficies or Solids, for the matter conjoynd being dissolved, the matters conjoynd are separated.

Prop. 5.

VII. That a Chasm cannot be made without loss of some intention of Nature.

This is evident out of the foregoing Proposition, for if it could be made without loss of any such intention, it necessarily follows that the matter making the Chasm was made in vain, which is against the Principles of Philosophy.

Prop. 6.

VIII. That the loss of any of the Intentions of Nature, is in order only to her dissolution.

This is understood from the fourth Proposition foregoing, for as we there say, take away the matter conjoyning, and the matters conjoynd will be separated.

Prop. 7.

IX. That the dissolution of

Nature is the destruction of the Humane frame.

How can it be otherwise, when Nature, which is the the thing which conserves it is taken away.

Prop. 8.

X. In Nature lies the band of Unition, by which all the parts of the Body, and every particle of the same parts are glewed, knit, or joyned together.

Prop. 9.

XI. That this band of Unition is only in the Medium of the Life.

There is a difference between the Medium of Union, and the things to be United.

Prop. 10.

XII. The Medium of Unition is the Blood, the things to be United are the Humane Frame and the Life.

But it is the Life it self which is the real uniting Principle, which because it is immaterial, and so without parts, and not capable of Division of it self, so also is it impossible to be disunitied from any thing with which it is joyned, unless the medium of that conjunction be first destroyed, which is first begun by a Chasm or Hiatus.

Prop. 11.

XIII. That as a Chasm is the Medium of the separation of united things; so the diminution of the Medium of Unition, is a diminution of the United forces, and so consequently the inlet to destruction of the conjoynd Principles.

Prop. 12.

XIV. The Medium of Unition adds strength to the the things Uni-

United, by vertue of their conjunction, or being made one, for vis unita fortior.

Hence it is evident that the abstraction of that Medium, must be the dissolution of that strength or force; and proportionably as that Medium is augmented or diminished, so must the strength of the conjoynd things, either decrease or increase. But we have before proved that nature does not at all increase the Blood in vain. Hence it follows.

Prop. 13.

XV. That the taking away of the Blood. 1. Hinders nature in performing her Operations. 2. Diminishes her generation. 3. Frustrates some intention of Nature. 4. Diminishes the Medium of Union. 5. Impairs the strength. 6. Opens a Chasm, which being made sufficiently wide, lets out Life, and introduces Death.

What we have said before at Sect. 36. 37. 38. 39. 40. 41. 42. 43. 44. and 45. Cap. 13. is the Opinion of others: what we have here already said, and have yet to say upon this Subject, is our own Judgment. It does also manifestly appear that the Root, Foundation and causes of all Diseases is the aberration of the Spirit and Life, whether it be from external Force, or internal obstruction.

Prop. 14.

XVI. Now since the diminution of the Quantity of the Blood cannot be made without manifest damage, That the alteration of the Quality of it, when it is hurt, ought with all dexterity to be attempted some other way.

The Quality of the Blood may easily be hurt, yea and the whole Mass of it corrupted by the aberration of the Spirit and Life: in this Case, the manner of its Purification and reduction is to be considered, not its diminution; Barbet has these Words: The French, Italians, Spaniards, and Portugals, (great Blood Letters) will, I expect, (saith he) tell me, That Nature when by bleeding she hath Vent and is somewhat discharged, shall be better able to throw out the remaining evil: And this seems to be true, for the Blood indeed receives Air, that the Spirits may the better fly away, and is robbed of that strength which it so necessarily wants, whereby Nature exchanges the Life of the Patient for Death, and extorts tears from the by-standers. Without alledging other Reasons, they ground themselves upon Experience: And it were to be wished they had that ground indeed; for we find such Patients of theirs, who in the morning were in no danger, even after the taking away of but 5 or 6 ounces of Blood, to be cold and stiff at night. Whence it may easily be collected, what it is they call Experience, viz, if the Patient by chance escape Death, then Bleeding must have the Honour of it; but if they dye, as for the most part, then the malignity of the Disease was the Cause of it. Wherefore I alledge Experience against Experience, and prayse God Almighty, that he hath vouchsafed to furnish all those, who without envy, passion, or slavish dependance upon others, will duly consider Diseases, with surer means. Thus Barbet. Those that

that let Blood, do it generally upon one of these 3 Considerations. 1. In a Plethory: but we have proved already, Sect. 5. Prop. 3. That Nature makes no Blood in vain. 2. For Revulsion, but he that is a knowing Physician, can tell, That the Diæresis must be performed just by the opposite way to (or undoing of) the Synthesis. 3. For Derivation, what need is there of that, which is done by making the Analysis backward, as the Genesis is made forward. 4. For Refrigeration: O prodigious, to make Quantity for Quality. If out of a boiling pot of Water, you take any quantity, the remainder will boyl the faster, and be the sooner evaporated, seeing the same fire or heat has now a lesser quantity of matter to exercise its fury upon. 5. For Corruption of the Blood, which yet they declare that the greater corruption is to be Cured by purging, the lesser by bleeding. To such we Query: 1. How must we know the degree of the Corruption, of the Blood? 2. Whether what remains, be not as much corrupted (*pro quantitate*) as it was before? 3. Why the greater corruption must be cured by purging, the lesser by bleeding, since they give all corruption of Blood, the general name of Caco-chymia. 4. How things which do only differ *secundum magis & minus*, do differ in *Specie* to require different specificke Remedies? 5. How this diminution of the Blood can be made without loss of strength, which in this case is so highly necessary? Barbet has also this farther observation. Others (saith he) pro-

ceed yet farther, and shed Innocent Blood in all sorts of Feavers, without any consideration of Spots of the Plague, or of Poyson it self, thus freeing themselves from a great deal of labour and trouble, caused otherwise to the Physician, from the variety of Feavers. But because the nature of all poyson and Malign humors is continually to assault the Heart, and suddenly to prostrate the strength of the strongest persons; and since bleeding likewise doth both; not only diminishes strength, but also draws the Malignity towards the Heart, driving in again (for the oppressing of nature) what she had before thrown out, for her relief: I do entreat all Practisers of our Art, that as they love the quiet of their Minds or Souls, and the good of their Patients, they would beware of Bleeding, in Pestilential or other Malign Feavers, as also in all cases that may beset people by poyson, either inward or outward.

We design not to write many hard and great things, against this Principle of Blood-letting, but only those few plain and true propositions, which we hope will be embraced by all the lovers of truth.

XVII. The opening of an Artery. The former Reasons which have been just now offered against bleeding of a Vein, may serve here: to which add the dangerous and frightful Operation, by reason of which, none of the Moderns but dislike it: yet for the curiosity of such as desire to know how it is to be done, and whom substantial Reason cannot perswade out of their road, we will here shew the way.

Some

Some tye a Bandage about the Neck, but seeing, when it is hard bound it is very troublesome, others think it better that the Ligature be made under the Armholes, which must be so straightned, that the jugular Veins and *Carotide Artery*, may appear both by swelling and touch, then let the *Arteries* be compressed by the Thumb, a little below where you intend to make the Incision: being opened (which must be done, by a steady and strong hand) take forth what Blood you intend; which done, strew some Astringent powder upon the Wound, then put over it a double linnen cloth, with a Plate of Lead, after bind it up with a fit Bandage, which in five or six days will be perfectly well.

XVIII. *The intentions for which these kinds of Artists open an Artery*, are against inveterate Head aches, Megrims, Palsies, Madness, Epilepsies, Inflammation of the Eyes or Ears, for which purpose they open the *Arteries* of the Forehead, Temples, or those behind the Ears, or *Arteria puppis*, all of them branches of the External *Carotide*. In the Inflammation of the Liver and Diaphragma, the *Arteries* between the Thumb and fore-finger. In Palpitation of the Heart, either that or the *Siphena*, is to be opened. Other *Arteries* are not to be opened, except a bone lyes under them, for fear of an Aneurisma.

XIX. *Broncotomia seu Laringotomia*, is the opening of the Wind-pipe, when persons are troubled with that kind of Quinsy

called *Cynanche*, where the sick is in danger of suffocation, that Disease being more dangerous than this Operation. Let the sick bend back his head, both to stretch out and better shew the *Aspera Arteria*: draw a Line with Ink from the middle of the Neck before, almost to the Cavity of the *Jugulum*: divide the skin, according to the length of the *Larnix* unto the hollow: let him that stands by to assist pluck by the skin on each side, that the Artist may see and remove the two long muscles, called *Sernobyodes*, with a knife made either with wood or bone: the *Larnix* then appearing, make an Incision in the middle; between the third and fourth *Annulary Cartilage*, taking heed that you hurt not the *Cartilages* themselves. When you find the Breath to come forth, take out the Incision knife, and put into the place a pipe of Silver or Lead, yet not so deep as to reach to the hinder part of the Wind-pipe, least it cause a continual Cough. The danger of Suffocation being over, which is generally about the third or fourth day, take forth the Pipe and Cure the Wound, as you do others. Before you do this Operation, beware lest the *Lungs*, *Pleura*, *Gullet*, &c. be not also inflamed, or already full of matter: An inflammation and corruption of the *Larnix*, is most commonly Mortal; if therefore upon these accidents, you attempt this work, the death of the Patient may prove matter of Scandal.

XX. The

XX. *The opening of the Breast.*

This operation is chiefly used in a Dropsy of the Breast. The place of opening, is said by some to be between the third and fourth Rib; by others between the fourth and fifth; and others say, between the fifth and sixth (reckning upwards) this last is thought safest, for if higher the *Pericardium* may be hurt, if lower the *Midriff*. But as in other Tumors, so in this, the most raised place is most fit. So that if a Tumor appear on either side, make the Apertion 4 or 5 inches from the *Sternum*, and nearer to the lower than the upper rib, because under each rib there lyes an *Intercostal Vein*, *Artery*, and *Nerve*. First mark the place to be cut with Ink; charge the sick to hold his Breath, as long as he can, mean season make an Oblique but small Orifice, into which put a Pipe of Silver or Lead; at which suffer $\text{Ziv. or } \text{5.}$ to run out in a day; if the matter run not well, place the sick on the wounded side, and make him Cough. If yet it will not come, by reason of its toughness, inject into the Cavity some absterfive, healing and drying Medicine, as *Decoctum Vulnerarium*, *Decoctum Fumaria compositum*, See my *Dispensatory Lib. 4. Cap. 14. Sect. 8. 17.*) or *Infusum seri Lactis Mesuae*; letting the Patient take inwardly, *Decoctum Vulnerarium Mynsichti* (at *Sect. 30. of the aforescited place*) of which he may drink often in a day about two ounces at a time. If the sick be weak, and the in-

ward parts corrupted, this Operation is more dangerous, otherwise it has proved more effectual, than in the *Paracentesis*, for a Dropsy in the Belly. But before you do it, first try all other means, as Expectoration, purging by Vomit, Stool and Urine, Sweating, &c. and if they fail, then make use of Chyrurgery.

XXI. *Of the Paracentesis.* This Work is generally performed upon such as have a Dropsy of the Belly, called *Tympanites*. Thus: If the Navel stands forth make the Apertion there; but if not, which is usual in this Case, then make it three inches below the Navel, on the Muscles, called *Obliqua descendens*, near the side of the right Muscle, but so much, whether on the right or left side of the Belly, as the breadth of two fingers or more. Then mark the place with Ink, and make the Operation according to the *Ductus* of the *Fibres*; a little obliquely thus ['] on the right side; and thus [^] on the left side; peircing the *Skin*, *Muscles*, and *Peritoneum*, taking great care, that the *Omentum* or *Guts* be not wounded: as soon as you perceive the Water come forth, put in a pipe of Silver or Lead, which is smooth, fixt at head with broad wings, perforated with three or four small holes on the sides of that end which is put into the Apertion, no longer than the thickness of the diseected part, which is about an Inch, somewhat crooked at the end, and exactly fitting the

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size

size of the Orifice; which put into it, laying over it a sticking Emplaster, and upon that a spung or fourfold doubled rag, all which bind on very well, and let the sick rest for two or three hours: then open the bandage, and take away one, two, or three pints of water, seldom or never more at a time; this repeat once or twice a day, till the water be almost discharged: for to take away all at once, would so chill the parts, as to endanger the Life of the Patient. The pipe is to remain all the time of the Cure, at last remove it, and Cure the apertion as an ordinary wound.

XXII. But this Operation is better performed by the steel pipe of Jacob Block, made with an end like a Lancet, and sharp, with holes on the sides: this is to be thrust into the Cavity of the Belly, through the right Muscle, where the Orifice is soon healed, taking out but a quart of water at a time. This done, take out the Instrument, and lay upon the hole only dry Lint, with a sticking Emplaster over it, which will keep the water in two or three or more days: after according to the strength of the sick repeat it, either by opening the first Orifice again, or making a new one, if the Artist find the water to be drawn another way.

But before these operations be performed, consider that the Body be not too much emaciated or wasted. 2. That the Dropsy be Recent, at least, that the great bulk of the Tumor be but of short standing. 3. That the patient have no Fever,

nor difficulty of breathing. 4. That the Noble parts be sound and uncorrupted. 5. That the person be of middle Age, or at least very strong, because in children and aged people it succeeds not well. 6. Take care to preserve the natural heat, for after opening, the parts easily Gangreen or Mortify. 7. That because the water can hardly be so kept in, but that sometimes it will run out in spite of the Operator, you must not in closing the Wound, forcibly press the pipe, lest you cause the death of the patient.

XXIII. In an Hydrocele (when the water falls into the Scrotum) you may make a discharge of the Humor, by the last mentioned Instrument, so dexterously, that the next day, you shall hardly be able to find where the hole was.

You may apply this Instrument very facetiously to an Empyema, and to a Dropsy of the Breast, at Sect. 20.

XXIV. The pudenda Virginum are sometimes closed with a preternatural Membrane: sometimes the parts are wholly grown together, and sometimes they are joyned upon an ill affected Ulcer: you must open these long ways, with a sharp Instrument, in part wound about with Linnen rags, and then cure the wound the common way.

XXV. Sometimes a preternatural Caruncle shuts the Os Vulvæ. Here you must have a Speculum Matricis, and in the latter end of the Cure a small pipe, perforated throughout in length, to help the Cicatrizing.

XXVI. The Anus sometimes is imperforated, and the Intestine cover-

covered with a Membrane : if this Membrane be thin, it is to be opened with the Fingers, if thick with a Lancet long ways, then kept open with a small leaden Pipe, and drying Medicines.

XXVII. *The Cavity of the Ear being closed with a Membrane,* by Which the Hearing is lost, is to be cut with a sharp Instrument, and as soon as may be Cicatrized.

XXVIII. *Some Children are Born Tongue-tied,* wheteby they are deprived, first of Sucking, then of Speaking : This is remedied by cutting the string of the Tongue, transverse, with a pair of Sizars, and besmearing it afterwards with honey of Roses, three or four times a day. In cutting, the neighbouring parts and veins, must be carefully shunned; for sometimes the Nerve of the sixth pair or its branches, run so neer the string, that a deep Incision may easily do much hurt, and bring upon the Patient sad accidents. But there is not one child of an hundred, scarcely of two hundred, which needs this mannual Operation : and those Midwives, are Ignorant, who in all new born Children, forthwith dilacerate this frenum or string, whereby the parts being hurt, evil Symtoms succeeds, and sometimes death.

XXIX. *To make Issues.* An Issue is a little Ulcer made by Art, in a sound part of the Body, by a red hot Iron Lancet, Scizers, or corrosive Medicine, to evacuate superfluous humors, and so either to prevent or Cure

diseases, Let them be made between the Muscles, not in the beginning, middle nor end of a Muscle : if you make an Issue in the Head, let it be in the middle of the *Coronal Suture* : In the neck between the shoulders : if on the Arm, about the middle space between the shoulder and elbow, towards the out side : if on the Thighs, let it be on the Inside two or three fingers breadth above the knee, if on the Leg, as much below the Knee. The way of doing of it is by Incision, Caustick, or Burning : § 1. *By Incision.* Take up the skin on both sides, either with a pair of Forceps, or your hand, which done, divide it in the place you intend, (first marked with Ink) with a Lancet, Incision knife, or a pair of Scissars. § 2. *By Caustick.* The place being first marked with Ink, apply a plaster, with a hole in the middle over it, in which hole put the Caustick, over the place marked; over which lay another plaster : after three or four hours take off the Emplasters and Causticks, and apply on the Escar a Plaster of Diapalma, dressing it twice a day, that it may the sooner separate. For a Caustick, you may use *Lapis Infernalis* (in our *Pharmac. Lib. 3. Cap. 11. Sect. 102.*) or that made of Silver (at *Sect. 20. Cap. 2. Lib. 3. of the said Book*) § 3. *By Burning.* Apply the Caustery red hot, yet so, as that the Skin be not wholly penetrated, least you hurt too much the subjacent Muscle, after remove the Escar, as before. The Escar being fallen, put into the hole a little Ball of wood,

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Wax,

Wax, Elder pith, Silver, or a Pea, &c. which are often to be taken out, and renewed continually, till the Disease be Cured, or weakness hinder, applying over only green Oyled Cloth. If the Issue should grow up, make Balls of Gentian, Hermodact, Orrice, &c. So may you remove the proud flesh: a Ball made with præcipitate and white wax, will keep it open: If hot scalding humors flow, apply to it *unguentum Album Camphoratum*, mixt with an equal quantity of *Populneum*: if it smells ill; wash it often with generous Canary, mixt with an equal quantity of Rhenish Wine.

XXX. *To apply the Seton.* A Seton is much a greater trouble than an Issue; yet this advantage arises from it, that what evils two Issues will not remove, is oftentimes don by one Seton. It is made in many places; as, Arms, Legs, Brest, Ears, Region of the Liver, Spleen, Navil, Scrotum &c. But the chief place is the Neck, between the first and second Vertebra, or second and third, or which is best, between the third and fourth. *Take up the skin, with a perforated pair of Forceps, nip it pretty hard to stupify it. Through the perforations, of the Forceps and skin, pass a Needle red hot, after which, with another Needle, bring through the silken string or chord.* The first day to ease pain, apply to the part, Lint dipt in Whites of Eggs and Rose Water, mixt together, then procure digestion with convenient Medicines: afterwards let the

String be drawn every day sometimes to this side, sometimes to that, that the matter part may hang out of the Wound: the Ulcer is thus to be kept open, as long as need requires. But *Barbet* tells us, it may be much easier, and better performed thus. *Let the Artist take up the Skin in one hand, and his Servant with another; and in the place he intends (first marked with Ink) let him pass it through, with a sharp pointed Needle, not made hot, to which let be first tyed a convenient chord of Silk or thread, rubbed over with wax.*

This Operation evacuates from the Head, Eyes, Nose, Teeth, and causes derivation from the Mouth, Brest, Spinal Marrow, and Joynts; It Cures Head Achs, Megrims, Vertigo's, Fistula Lachrymalis, Hydrocephalus, &c. In Scrotum, Hernia aquosa.

XXXI. *Of Burning or Ustion.* It is performed, either with actual or potential Cauteries. The Actual are the better, the Potential are more acceptable, because of peoples fearfulness. The Actual is done with a cauterising Iron (made at the end in form like a Burton) the Potential with *Lapis Infernalis*, and other Caustick Medicaments. The Intention is 1. For Making Issues. 2. For Application of the Seton. 3. To stop Bleeding after Amputation.

XXXII. *The Gums in Infants* are sometimes long in cutting, whereby Death oftentimes ensues: if extremity urge, with an Incision knife, make a gentle

Apertion, so may you haply save a Life, which otherwise would be lost.

XXXIII. *The Glans of the Yurd not perforated*, is to be carefully opened with a Lancet, after which put into it a small Silver, or rather Lead Pipe, fitly dressed, where keep it till it is well. If the *Frenum* or Bridle be too short, you must dilacerate it with an Incision knife, and then heal it as other Wounds.

XXXIV. *If the Fingers and Toes grow together, whether Naturally, or by Accident*; you must divide them with an Incision knife, (unless, conjoyn'd by Nerves, Tendons, or Arteries) then strew them with some Astringent powder, laying over Cloths dipt in the white of an Egg, beaten with Rose Water and Oyl of Earth-Worms, after which, perform the Cure, as in other Wounds. Where note, that in this and in all such like Operations, use preparatively, general Evacuati-
ons.

XXXV. *Scarification, is performed with a Lancet or Incision Knife*: the Ancients have donit alone, without Cups, the Moderns use it not without Cupping. It is intended either for Revulsion or Evacuation, sometimes of the whole Body, sometimes only of particular parts. It has been used in Acute, Putrid, Malign and Pestilential Feavers, chiefly in Children, and that with great success; in Apoplexies, Frenses, and all affects of the Senses: In Affects of the Gums, all outward Pains, Ulcers,

Ecchymosis or Gangreen, where it was either present or might be feared, in which Case it might be said to be either Therapeutick or Prophylactick.

XXXVI. *The opening of Varix is done by Incision all a long the Tumor, having tyed both ends*: Others having found out the extent, of it, divide the skin at both ends, where having taken up the Varix and tyed it, they make Apertion in the middle: But *Sculterus* says, both ways may prove unsuccessful, and therefore advises rather to To-
picks.

XXXVII. *The opening of an Apostema or Abscess*. First consider whether the matter be contained in its own proper *Cistis* or *Tunicle*, or not. If it be in a *Tunicle* and be small, make the Incision long-ways: if it be big make a double Incision; viz. Cross-ways; but beware of touching the *Cistis*, lest you have a Fætid, and almost incurable Ulceration. *The Apertion being made wide enough*, press out with your Fingers the whole Vessicle, or body of the Apostume, which seldom or never sticks to the skin, and will easily come forth: but have a care, that not the least particle of the bag remain behind, lest it gather again. Those Apostemes which happen behind the Ears, in the Neck, Armholes, or in the Groin, spring from Indurated Glandules, repleat with a præternatural Humor, comprehended in their own Membranes, which being toucht either with Instrument or Caustick Medicines, there follows a gleet of

the Contained humor, which will continue till the whole Glandule and Tunicle are both consumed, and it may be also in the mean season corrupt some of the adjacent parts.

XXXVIII. *If it be without a Tunicle*, then make the Apertion in the right Line, observing the *Fibres of the Muscles*: In the head, according to the position of the hair, long ways: In the Eye-Lids, transverse: In the Nose, Neck, Breast, Back, Arms, Feet, Joynts, long-ways: in the midst of the Belly, long-ways, in the Sides a little slanting; in the Groins transverse, but not very deep, by reason of the subjacent seminary Vessels: And always take heed, least you touch any great Vein, Artery or Nerve, though you cut the *Fibres* across, least from a lesser evil you create a greater. The place of opening is the highest and softest part of the Aposteme, and if possible, in the depending place thereof, that the Pus or matter may the more easily be discharged: To which purpose, you are with a Tent to keep it open, till the part being wholly cleansed, may return to its prestine Health. Some open it with a Lancet, others with a potential Cautery made of Quick lime and Holland Soap. The Cautery is best for Timorous people, and is without great pain (unless very Corrosive) working deep enough into the flesh; but in a Contained Abscess, it may eat too deep, and according to the place do much mischief; besides which, it commonly spreads it self farther than

it should, notwithstanding the defensative; it is also some hours in doing the operation, and it may be at last (the Escar not falling presently) you must be forced to make use of the Lancet or Incision Knife; *whereas with the Lancet or Incision Knife the work is* 1. *Safely.* 2. *Speedily,* and 3. *without much pain performed*, by which the Patient has Immediate relief.

XXXIX. *Of the Section of Bones.* 1. *By Trepaning or Perforation.* Thus; The Hair being shaved, let the Skin be divided with a double Incision in form of a Cross to the *Pericranium*, avoiding with the greatest diligence always the Temporal Muscles and Sutures of the Head: this done bind up the Wound, unless the Hemorrhage be small (which sometimes is so violent as to hinder the Artist for some days from his Work) if it will then give leave, divide the *Pericranium* from the Skull: after a few hours (the Skull being bare of the *Pericranium*) let the Patient be well placed, his Head firmly held, and his Ears stopt with Cotton: Then set on the Trepan with a Pin, which ought neither to be upon the Fracture, nor the Sutures (as some have done it) and holding the Instrument with the Left hand, with the Right, gently turn the Trepan about, till it has taken good hold round; now take out the Pin, and set on the Trepan again without it, moving it still about: if there be any filings of the Skull take off the Trepan, and wipe them away

way; the *Trepan* you may sometimes Oyl, that it may goe the easier: and sometimes wet it with Water, that it may not grow hot: If Blood appears, be sure, the *Trepan* has past the first Table, after which you must have greater care, lest it unawares should slip in, and wound the Menings, from whence oftentimes follows sudden Death: The *Dura Mater* investing the inside of the Skull in the same manner, as the *Pericranium* doth the outside, but not so strongly joyned to it, but that a Fall or Blow, may easily separate them. The piece of Bone separated by the *Trepan*, beginning to be loose, with a little Instrument, viz. the *Levatory* put in between the Skull and the *Trepan*, free it from the hole, and take it out with a pair of *Forceps*. If any inequality yet remain in the inside of the inward Table, which may hurt the *Mennix*, take it away with the *Lenticular*, or *Scraper*. The coagulated Blood and matter take away with *Spunges*, *Lint*, &c. The *Trapan* is for the most part used but in three Cases, viz. *First*, where the loose pieces of the Bones prick and wound the *Menings*: *Secondly*, where the first Table is only depressed, but the Second broken, there being no way without *Trapaning* to give passage to the Peices: *Thirdly*, where there is an Extravasation of Blood, upon which follows putrefaction, and if not quickly remedied, Death.

XL. Other Sections of the Bones are made 1. By *Scraping*, which is used in *Fissures* and *Foul*

Bones, as also in the Teeth, being crufted over with a Blackish, Tartarous Substance. The Bones are to be scraped till you come to the Sound part, which is white and solid, upon the Bone thus scraped, strew some Powder: but before you go about this Operation, you must separate the *Pericranium* and *Periostium*, for they are no ways to be touched with Instrument, neither the lips of the Wound.

2. By *filig*. This is chiefly used to the Teeth, when they stand unnaturally, either too high, or too far forth. 3. By *Sawing*. It is done with a Saw in a mortified part, of which we shall speak when we come to *Amputation*.

XLI. The application of *Cups* or *Cupping*. They are applyed either without *Scarification*, or with *Scarification*. The Modus of application is either to stick dried flax with soft wax to the bottom within the Cup, or put in loose, after set it on fire, and presently clap it on. Some heat them very hot, in hot Water. Others stick in a little bit of Wax candle lighted, and so apply them. They are made of differing matters, and of various forms: Some are to apply and suck up withall, Others are Blind. If you do it with *Scarification*, having applyed them as before, and taken them off, then Scarify the part, which is to be done either superficially or profound, as the Nature and Constitution of the same will permit. The best time of application is in the Full of the Moon

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(not in the New) about two or three in the Afternoon.

XLII. *Their Use* is to stop Gangreens, and draw diseased matter out of a part wherein it is; To draw deep Apostems more outwardly and the Morbifick matter from the Noble parts to the less Noble and more Visible. To warm parts, Benumbed and Chilled, to attract the Blood and Spirits where they are recessed, to draw forth Wind and thin Humors, to ease pain, and reduce parts evilly conformed. They are applyed *to the Mold of the Head*, to stay Catarrh, draw up the Uvula, &c. *To the Neck*, for the Palsy, Quinsy, and affects of the Mouths, Gums and Teeth. *To the Shoulders*, for the Apoplexy and all sleepy Diseases, Coughs, Difficulty of Breathing, Diseases of the Brest, Pleurifies, &c. *To the Breast or Paps*, to divert the Flux of the Terms. To

the Arms, for pain, and instead of opening a Vein, and in Children, Aged persons, and Breeding Women. *To the Ribs*, to reduce them. *To the Navel*, for Falling out of the Womb, Wind Chollick, pain of the Bowels, &c. *To the Ears, and Orifices of Ulcers*; to draw things thence, as Venom, Matter, Filth, &c. *To the Hypochondries*, to divert Bleeding at Nose. *To the Flanks*, for Wind and Obstruction in the Liver and Splen. *To the Region of the Reins*, for Apostems of the Liver and Kidneys. *To the Ureters*, to draw down the Stone and Gravel into the Bladder. *To the Os Sacrum*, for Fistula's, Hæmorrhoids, &c. *To the Thighs, Legs and Anckles*, for the Strangury, pain of the Womb, Reins, Bladder, &c. *To bites of Venomous Creatures*, to draw forth their Poyson and Venom.

CHAP. XVI.

Of EXERCISES.

I. *Exercises* is the removing of things hurtfull: and is considered chiefly in extracting the Birth, Mola, Secundine, Stone, Teeth, Bullets, Arrows, Thorns, Bones, Urine, Blood extravasated, &c.

II. *Of a Dead Birth.* Let the Woman be put into a fit Posture, some put them to a Stool made on purpose, but now much out

of use: Others put them on their Knees: Others cause them to lean on Womens Shoulders: Others sit on Womens Laps: and some lye on a Bed or *Pallet*: let her not strive till strong pains come; then put up your Hand being first anointed with Oyl of Roses, and draw the Birth away: but if this proves Vain, you must use Instruments, though

though terrible and difficult, the chief of which is the *Hook*, (the form whereof you may see in *Sculptus*.) It is to be fixed to some part of the Head; as Ear, Eye, or Mouth, if that cannot be done you must fix it where you can, always taking care in drawing, that if the *Hook* should slip, you may neither offend the Womb, nor Neck thereof. The Child being thus brought away, you must put up your hand, and bring away the *Secundine*.

III. *Of Mola*. A Mole is a mass of Flesh without Bones or Bowels, being a false Conception, through fault of the Seed: 'tis known (but scarcely till the fourth Month is past) by a Beating and Trembling Motion, falling like a Stone on that side the Woman turns; the Belly is sooner great, and harder then in a true Conception: there is difficulty of Breathing pains in the Back and Groins, and no Milk in Breasts: being commonly begotten in the time of the flowing of the Terms. *Zacutus* extracts it with the *Griffins Tallow*, and then gave this Medicine. *R. Euphorbij ʒss make it in Powder with Syrup of Mugwort, form Pills, to be given four times in the space of twelve hours: also Pulvis Partum provocans* (see Our *Pharmacopœia lib. 4. cap. 21. sect. 20.* given ʒj at a time in Rhenish Wine is excellent.

IV. *Of a Living Child*. The time of Travel being come, and the Woman put into a fit Posture, at the time of her strong pains, let her force her self: if she be faint give her a little Con-

fectio Alkermes of Our Prescription; or *Cinnamon water*, mixt with a little *Tincture of Saffron*, and *Syrup of Roses solutive*, then, with the hand anointed with Oyl of Roses, dispose the Child to the Birth, by putting it into a Right Posture, lest you do more hurt than good: If the Head offer it self Right with its Face towards the *Anus*, receive it; otherwise endeavor to place it Right, then turn your Fingers round about the Head gently, thereby to make way for the Birth. If it comes any other way, endeavour to gain the Feet and bring it away, which is then more certain than the Head, but be sure the Childs Face is Right. *If the Birth be slow*, give the aforesaid *Pulvis partum provocans*, with a Spoonfull of Cinnamon water mixt with a little Spirit of Castor. If the labour has been long and hard, give *Sperma Ceti ʒj* in a draught of *Julepum Rosatum* Morning and Night: being in Bed, keep her quiet for a Week: If she has Gripings, anoint the lower parts, and indeed all the Belly with Oyl of Amber, applying warm Flannel very hot over the same moistned with the said Oyl: if those Gripings be extream, give the *Liquor Vitæ Anodynus* (see Our *Pharmacopœia lib. 4. cap. 11. sect. 11.*) to quarter of a Spoonfull in a glass of Sack: I have often used the Oyl of Amber, and this *Liquor Vitæ*, in this Case and in all after pains, with admirable success, yea when the hope of Life has been past, which as a gratefull acknowledgment of the

the goodness of God, I now here publish. If she goes not too Stool after three days give a Clyster made of near a Pint of Milk, in which about two Spoonfuls of Sugar is dissolved and strained. *The Child is to have the Navel string tyed with a double twine thread, a full Inch from the Belly, some say two: about an Inch from which Ligature it is to be cut off: but if the Child be weak, first put the Blood back towards the Belly, then tie it.* After the Section, apply a double Linnen Cloth dipt in Oyl of Roses. After which you may either cleanse the Child with dry Cloths, or wash it with Water warmed, mixt with Red Wine: If the Child has Fainting fits, give it two, three or four Drops of Blood squeezed out of the Navel string in a Spoonfull of Breast Milk: otherwise let the first thing which is given to the Child be Magistery or Poudre of Red Coral gr.x. or Poudre or Magistery of Mans Scul, gr.x. or *Pulvis Epilepticum Myrschti* gr.x. mixt with as much white Sugar Candy, and so exhibited with a little Breast Milk: Authors say, these things prevent the Child for ever having Convulsions fits or the Falling-sickness. If the Child has Gripings give fine Poudre of Aniseeds to ℞j in some Pap, &c. and increate it till the Child goes well to Stool; it has excellently succeeded in Children, till they have been a quarter or half a year old.

V. Of drawing out of the Secundine, or After-Birth. It has of-

tentimes been unhappily left by Midwives, sometimes wholly, and sometimes but in part, thereby destroying the Patient. It is removed *Manually*, thus: Put up your Hand, guiding it by the String, which done lay hold on the Secundine, removing it gently, and by degrees: after which put a Closure to the Woman, bidding her keep her Leggs close, that it may kept there, and cold prevented for entering into the Womb, which might then destroy the Woman: after which being laid in Bed, give her a little Water-Gruel, made of three parts of Water, and one of White Wine, or of Water and Strong Beer. 2. By *Medicine* it is best done with *Pulvis partum provocans* aforesaid, which for security sake, you may give, although beforehand, it was done manually, lest any part or parts thereof should be left behind.

VI. *The Casarian Birth.* This is to cut a Living Child from a Dead Mother: which though seldom used, is thus to be done. Make incision from the Breast Blade to the Privities Semi-circularly; then carefully take up the Womb, and open it cautiously, so as you may take out the Child: Cut not off the *Secundine* immediately, but if there be any heat in it, lay it for a while to the Childs Belly: after the Child is taken out, you may know that it is alive, by Beating of the Arteries of the Navel, and the present Motion of its Members.

VII. Of *Lithotomia* or Cutting for the Stone in the Bladder. This

Operation is more dangerous in aged people than in young, and by how much the greater the Stone is, by so much the Operation is both more difficult and painful: If the Stone is included in a *Cistis*, or adheres, to the Bladder, it cannot be taken away by *Section* without the Death of the Patient. *The first way, called Apparatus Minor, is thus done.* Let the Child (for it is chiefly used to Children) be placed on a soft Pillow in a strong mans lap, (after three or four times Jumping from an high place) tye both his Hands to the Soles of his Feet: let two standers by hold each Knee, pulling them as far a sunder as may be: then his Fingers being anointed with Oyl of Roses, let him take the first Finger of his Left Hand, or, if necessity requires, the two first Fingers, and thrust them up the Fundament, with his Right Hand let him gently comprers the parts above the *Os pubis*, so that the Stone may slip down under the *Os pubis* into the *Perineum*, which when brought thither by the aforesaid Fingers, make an Incision with a sharp Knife, in the left side, between the *Testicles* and the *Anus*, near to the *Suture* of the *Perineum*, cutting to the very Stone it self: if it comes not out of the Wound of it self, nor by the thrusting forth of the Fingers, which are in the *Intestinum Rectum*, draw it out with a pair of *Forceps*, or which is better, with the *Lapidillum* or Spoon. The Stone being taken out, and all the Ligatures loosed, apply Medicines stopping Blood, as Meal

mixt with Bole, &c. then bind it up according to Art, taking great care to consolidate it as soon as possible, lest the Patient have a dropping of Urine through the Wounded part.

Before you begin this Operation, let the Patient have had a Stool, and made Water, and let him be well shaken by the Arm pits, that the Stone may fall into the Neck of the Bladder: have also ready all necessary Instruments, as Carbetters, Probes, Conductors, Specula, Pincers, Forceps, small Hooks, Spunges, astringent Pouders, Roulers, Cordials, &c.

VIII. *The Second way of Cutting, called Apparatus Major.* Put the Patient on a Table being first bound, and held as above: then through the *Urethra* pass a Director into the Bladder to the Stone: after make an Incision, as aforesaid, in the hollow of the Director; put in the Conductor, taking the Director out; then pass through the Wound the *Forceps* or *Lapidillum*, or other fit Instrument, by which the Stone may be both layed hold on; and drawn forth, not making use of the Fingers in the *Anus*, except great necessity urge it. If the Stone is bigger than the Orifice, so that it cannot come forth, the Wound must be enlarged either by Incision or the *Dilator*; or else the Stone must be broken in pieces by the *Forceps*, and so drawn forth in parts, after this, dry, stop the Blood, bind up, and consolidate as we taught before. But if the Wound be too great give it a Stitch, and put in a Silver Pipe two or three

three days, that thereby the concremented Blood, Slime and Sandy Urine may come forth.

IX. *There is another way* (but now it is quite out of use because of its danger) *which is thus.* Putting your Fingers into the Anus, Press the Stone up to the Belly; then make an Incision in the Right Muscle, above the *Os Pubis*, according to the *ductus* of its *Fibres*, and by the assistance of the *Lapidillum* or *Forceps* draw forth the Stone.

X. *The manner is the same in Women*, save the Fingers are not put into the Anus, but into the *Vulva*, where the *Catheter* and *Director* must be straight and much shorter, than those used for Men: But Stones are often drawn out of Womens Bladders about the bigness of a Wall-nut, and that without Incision, only by forcing it with the Fingers.

Note, *That whereas, at Sect. 8. advice is given to break the Stone with the Forceps, it may prove of ill consequence to the Patient, lest any bits of it remaining within should be the occasion of its Breeding again: wherefore in this Case, it should be much better: to make the Orifice so wide at first, as that it may be taken out wholly.*

XI. *The drawing of Teeth.* You must first open the Gum with a *Fleam*, then by force draw them out with *Percers*, half *Percers*, *Pellicans*, or *Punches*. If the Patient will not have the Tooth drawn, you may ease their pain by holding in the Mouth *Spiritus Odontalgicus* (in lib. 4. cap. 2. sect. 10. Of my Di-

spensatory.) If they be *Black and Scaly*, take them off with the *Scalpra*, then rub them with fine Ashes of Bones, or wash them with *Rose water* made a little sharp with *Oyl of Sulphur* or *Vitriol*.

XII. *The drawing out of Bullets, Arrows, Thorns, &c.* If the Bullet is difficult to find, and it be of Lead, and not easy to get forth, cure the Wound without extraction: But if it be near to the part where it did enter (putting the Sick as near as may be into the posture he was in when Wounded) feel out the Bullet with your Fingers: then with *Blunt Hooks* (to lift a side the Vessels) and *hollow Forceps*, *Goose* and *Ravens Bill*, or *Incising Forceps*, draw forth the Bullets, &c. but if it be near to the opposite part, you must cut them out there, lest it be injurious to draw them out the way they went in. Peices of Iron, Arrows, Thorns, Pieces of Garments, &c. are very hard to draw forth; yet they are done with proper Instruments, if they be in Sight: otherwise when once the Wound comes to digest they are many times cast out by nature.

XIII. *Things sticking in the Throat.* Fish Bones or other things sticking in the Throat, if seen, may be taken out with a pair of *Forceps*: otherwise let them be thrust down with a small Whale Bone made fit of about half a yard long: the end to be put down is to be thick, and so growing small by Degrees towards the other end.

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XIV. *Urine obstructed through time or other matter is drawn forth, by putting up the Catheter, into the Bladder.*

XV. *Blood extravasated: if it be not Varix or Aneurisma is drawn forth by a Simple Incision of the part.*

CHAP. XVII.

Of APHÆRESIS.

I. *Aphæresis is the removing of things superfluous, which is done chiefly by Friction, Bath, Sweating, Fasting, Purging, Vomiting, Urine, Leeches, opening the Hemorrhoids, Amputation, Cutting of Cancers, Couching Cataracts, cutting of Hernia's, Wens, Warts, Corns, Carbuncles, &c.*

II. *Friction is a rubbing of the whole Body, or of some of its Parts, as Head, Back, Shoulders, Arms, Thighs, Leggs, &c. The Intention is to disperse humours, Excrements, Spirits, loosen Obstructions, open the Pores, divert Fluxes and Rhumes, cause free Circulation of the Blood, prevent Scabs, Itch, Pustules, Breakings out, Tumors, Cramps, and take away cold pains (caused through Congelation in most parts of the Body. It is to be done with a warm hand, sponge, or coarse linnen cloth warmed, beginning at first softly, and increasing by degrees, till the place becomes red, first from lower parts, and so ascending upwards: if it be done soft and long, it opens the*

Pores, and waists the humours: if hard and short, it makes the Skin red for a time: if hard and long, it fastens and makes the flesh hard.

III. *Baths are either Natural or Artificial. Natural Baths are chiefly those at Bath (supposed to Spring from Sulphur, and some Golden Mineral, Iron, &c.) they are used in Palsies, Sciatica's, Numbness. Hardness and Contractions of the Nerves, Morpew, Scabs, Scurf, old Sores, Tumours, old Pains, Diseases of the Joynts, Liver, Spleen, Itch, Leprosy, &c. Artificial Baths are made in Imitation of the Natural and to the same Intentions and Purposes: of which you may see several forms in our Pharmacopœia, which may easily be made much stronger by the Solution of proper Minerals therein. They are used either to the whole Body, or to a part only; not too hot for fear of hurting, and always after due purging: The time is chiefly at eight in the Morning, and about five in the Afternoon: at first, stay in not much above half an*

an hour : the following times you may stay in an hour or two, as your strength and convenience will serve ; being too much used they dry and weaken the Body : their use is to ease Pain, open the Pores, evacuate superfluous humours, resolve, make thin, heat, cool, dry, moisten, cure Gouts, Sciatica's, Poxes, &c.

IV. *Sweating*, it is used for all the same Intentions and Purposes that Baths are designed for, and no ways inferiour to them, and being used three or four times a year, is found to be a good expedient against the Scurvy, and to preserve the Body in Health : Goe into it, in the morning with an empty Stomach (as to Food,) but it will be good to be repleat with two or three Glasses of Sack : in the time of the Sweat give some pleasant Sudorifick Cordial a little sharpened with Oyl of Vitriol or Sulphur ; stay in as long as may be conveniently, but come forth before Fainting, Wiping off (in the mean season) the Sweat with warmed Napkins : then be immediately lay'd in a warm Bed, and covered with Cloths, where sweat well again for 2 or 3 hours, and if you can, repose your self to sleep : if you enter into the Sweat about seven or eight in the Morning, you may rise before Dinner, and use gentle Exercise, keeping your self warm, because the Pores are open. *The way of Doing it is in Hartmans chaire, with Spirit of Wine set on fire ;* which certainly was one of the most happy inventions in

the World : I shall omitt the description of it at this time, because it is now common in London.

V. *Fasting is of use (whilst the Body is emptying) to lessen the quantity of Humours, by hindering their Generation, and this chiefly in universal ill habits, and elderly people : for Children are scarcely able to bear it, nor Chollerick people, for Bile causes a vast Consumption of Humidity. As to Purging, Vomiting, provoking Urine, Courses, &c. they more properly belong to another place, as being chiefly done by Medicine, not by Chyrurgery.*

VI. *Leeches are applyed to the Veins of the Arms and Leggs, to Hemorrhoids, Vulva, Gums, Lips, Nose, Ulcers, after scarifying in Gangreens, Herpes, &c. and that in general evacuations of the whole Body : when you apply them, make the place clean with Milk and Sugar, rubbing it till it grows red : then hold them near the Head in a Rag, and so apply them to the place, it being first moistned with Pigeons Blood : if you would have them fall off before they have done, cast Salt on them : if you would have them suck longer than full, cut off their Tails. Chuse them in clear Water, Sandy and Gravelly Ponds, whose Heads are little, Bodies small, Bellies red and round, and Backs streaked like threads of Gold : they ought to be kept twelve days at least before they are used : you may keep them a Year in Water with a few Crumbs of Bread, change*

changing the Water once in four days. Those in muddy, filthy and stinking ponds with great Heads, greenish colour, and blew streaks on the Back, are Poysonous and dangerous, exciting venomous tumors, Inflammation, Ulcers, Convulsions, and sometimes Death. They are often used in Melancholly Diseases, Leprosy, Ringworms, repletion of malign matter, Pleurifies, Inflammation of the Lungs, Phagedena, Furunculus, Vertigo, Epilepsy, Apoplexy, Megrim, old Headachs, Diseases of the Eyes, and many other desperate Diseases.

VII. Hemorrhoids are opened by Frixions, Fig-leaves, course Cloths, Juyc of Onions, &c. If Outward: but by sharp Clysters and Suppositories, &c. If Inward or Blind: being opened they diminish a Plethora, and help Diseases of the Bowels, Womb, Reins, Bladder, Joynts, Liver, Spleen, Mesentery, &c.

VIII. Of Amputation, Dis-membring, or cutting off of a Mortified part. Some Authors say, That this Operation is most conveniently done in the Joynt, but when the Cure is rendred the more difficult, and the use of the other part altogether lost: therefore the Extirpation is much better to be done, two or three Fingers breadth or more below the Joynt; except the Mortification has seized the uppermost part of the Arms or Thighs, then you must necessarily take the Joynt it self: the amputation is also more safe in the Sound part than in the Dead, though the former is ac-

companied with the greater pain. But Woodall and some others perform it in the Dead part. *The Common way is this.* § 1. Prepare the Body with good Diet as yolks of Eggs, toast dipt in Muscadine, Tent, Alicant, or Canary: and let the Patient be purged for some days before hand with Cassia new drawn, and such gentle lenitives; let him take three or four times a day *Confectio Alkermes* of Our Prescription (See *Pharm. Lond. lib. 4. cap. 22. sect. 2.*) § 2. Have in a readiness. 1. Two Saws, lest one should break. 2. A dismembring Knife. 3. Several Rowlers five or six Yards long. 4. Three great Needles (not much now in Use.) 5. Boulsters greater and lesser. 6. Pledgets of Tow greater and lesser. 7. Dorsels and Buttons of several sizes. 8. A large Bowl with Aspes Water and Vinegar. § 3. Then the Patient being conveniently seated, draw up all the soft parts with a strong band, after make a Ligarature hard, girtting it strongly, and pressing powerfully upon the great Vessels, with your Fingers, which may in part also keep the Patient steady. § 4. This done, with the *Dis-membring Knife*, cut the skin and flesh round, very speedily to the Bone: If it be in the Leg or below the Elbow, divide the Flesh between the fossiles with the Incision Knife; after separate the Periostion from the Bone by scraping of it either with the edge or back of the Incision Knife. § 5. With a sharp Saw, cut the Bone as near to the living flesh as may be. § 6. The operation thus over, there will be a flux of Blood, which

which if it be not too great, you may stay, it only by such Medicines as stop Blood, as *Pulvis Dysentericus Crollij*, *Pulvis Sperniola Crollij*: or mix equal parts of Umber and unslakt lime together, with a little Hair in Powder or Ashes of an Old Hat, which reduce into an Oyntment with the White of an Egg: but if the Flux is great, you must use an actual Cautey to the Mouths of the Vessels, otherwise in the use of the aforesaid Pouders, take four of your greatest Buttons, made of Tow moistned well in *Posca*, which arm with either of the said Pouders, and apply them to the great Vessels, speedily applying over them, a thick bed, made of Tow, dipt also in *Posca*, and spread thick over with the Powder. § 7. Have another Bed made so much larger, as to reach an Inch or two over every side round, and armed with the Pouders as aforesaid, to be laid over the former, on which draw a Bladder, and on it make a Ligature an Inch broad near the top, over all these lay a four fold Linnen Cloth. § 8. But if the flux be great, and the Patient refuses the Actual Cautey, then, as soon as the Member is taken off, let the skin together with the flesh, in four distinct places opposite one to the other, be taken up with a Needle and waxed Thread, and the Ligature loosned above, or drawn down, that if possible they may meet: this way is painful and troublesome, and therefore seldom to be used, yet it stays the Hemorrhage, preserves the Bone from all danger,

and make the Wound to be the sooner cured. § 9. If you use not the Bladder, be sure your Buttons be ready to apply to the place where the Blood appears, as you roul up the part: and having loosned the Ligature, roul up the Member with Swaths dipt in Oxycrate, applying to the next Joynt above a Defensative. § 10. Observe, that unless there be great pain, that you dress it not till the third Day; then have in readines Stuphs and good Roulers, the first may be dipt in white Wine or S.V. to be laid on the former applications that they may be the more easily removed, which do very gently: if the Bed next the Wound stick, remove it not till the third dressing: the applications being removed, strew the Vessels, with some of the former Pouders of *Crollius*, on which apply three or four Pledgets with Whites of Eggs dipt in the Powder; on these and the rest of the Wound apply *Basilicon*, *Balsamum Terebinthina*, or *Balsamum Arcei*, till there is digestion. § 11. After digestion mundify with *Apostolorum* or *Hartmans Vulnery Balsam*, or *Ung. 2. succis aperitivis*: then Incarnate, and dry with *Pulvis Dysentericus Crollij*: it dries without any biting property: over this you may apply some Glutinative Emplaster, as *Ceratum ex pelle Arietina Arnoldi de Villa Nova*, *Emplastrum Gratia Dei*, or the like. § 12. If proud flesh arises, use *Ung. Egyptiacum* laid on hot, upon which lay another Pledget, and so dress it up for about two days: the next dressing use on-ly

ly dry Lint or Flax, by this means the great sensibility of the Ulcer will be abated; or to eat the flesh away you may lay on Burnt Allum mixt with Vitriol, Burnt Ceruse, and Burnt Lead. §. 13. *At every dressing endeavour to draw the skin and Muscles together by degrees, that the Bone may be covered*; it is best done with the dry Stitch applyed a Fingers breadth from the Lips of the Wound round about the Member, &c. §. 14. *Lastly, Fingers and Toes, yea Hands and Feet, as also superfluous Joynts, may be removed by Chizels, &c. of which Sculterus Table 27. Fig. 12 and 15*

IX. *Aquapendens his way of Amputation: This is done in the dead part, but near the Sound, yet not too near it*: let two strong men hold both parts of the Member very stedy, then begin the Operation: the part being taken off, remove as much dead flesh as may be; then with red hot Cauteries, sear the dead part, and therewith heat the end of the Bone, till such time as the Patient perceives the heat of the Fire: after that make a fomentation with a good Lixivium, as in a Gangreen, which apply (not too hot) for about half an hour: this done apply Stuphs very warm to the part, binding it up, within the space of two or three days, there will be a separation of the mortified part from the sound. At second dressing do the like again, and cutting off the dead flesh with Sissers, forget not to heat the Bone, but beware of an Hemorrhage stealing

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X. *The Cutting off of Cancers.* This Operation is often performed on Cancers whether Ulcerated or not: and it is done either with Cauteries after Incision, or else with both at once; or by Incision with Adstrictives, but the first with Cauteries is best, because that Bridles the malignity of the Tumour, and also, if any small Portion of the Cancer should be left behind, may cause it to fall with the Eschar. If the Cancer be small not ulcerated, loose, and free from the flesh on all sides, Incision with Astringives may serve, letting it first Bleed if the Sick be strong. In this Operation, § 1. *Prepare the Body as we have taught Sect 10.* § 2. *Have in a readyness Pledgets, Boullfers, Rowlers, Needles, Astringent Pouders or Cauteries, as you intend, to proceed.* 3. *Take hold of the*
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C c *Cancer*

cer either with your Left hand, or a pair of round Forceps, then immediately cut it off, and apply either the Astringent Powder or the Cauteries, as you intend. § 4. Some cut it off with Cauterizing Knives red hot, then dress it up with Anodines, and such things as may cause the Eschar to fall, but doubtless tis none of the best way. § 5. Others (which is the most common way) pass two Needles through the Cancer, a cross at right Angles, and holding those ends up by threads or Strings, cut it off with a sharp Knife. In all these ways, let the part afterwards be anointed with Oyls of Roses and Myrtles, then cure the Wound according to Art. § 6. If after the Eschar is fallen, the Pus is thick, white, and laudable, pain and Symptoms be abated, and the flesh grow like Pomgrate Seed, it will do well. § 7. But if the Cancer grows to the Bone, or passes through any Internal part, it is incurable: A Cancer in the Lip is to be first cut out, then cured as a Hair Lip.

XI. The Couching of the Cataracts. Seat the Sick in a Chair, somewhat lower than your own, if you sit, bind up the well Eye, and cause him to hold his Hands about your Waist, not stirring them till the Operation is ended. Let some body hold his Head fast behind, and hold them asunder his Eye Lids, causing him to turn his Eye, towards his Nose: then thrust your Needle quickly in by the Cornea half a straws breadth) from the Iris, and some say a straws breadth, bring it unto the Hollow of the Eye: when the Needle hath

Couched the Cataract, endeavour therewith to press it gently, and so long from above downwards, untill it remains there. If it be stubborn in raising up; you must again and again deuide it into several Particles, and bring them down, keeping them in both a little while under, that they may not return again, before the Pupil of the Eye: then draw out the Needle, and bind up as well the Sound as the Unsound Eye: applying double linnen Cloths, moistned in Rose-Water, in which a little Alum is dissolved, and then beaten together with Whites of Eggs. In the Operation take heed of hurrying the Crystalline humour, and the Sound Tunicles: Apply an Astringive to the Forehead, let the Head lye high, and dress the affect for about fourteen days, ordering the Sick to stir, his Head and Teeth as little as may be. Let the time in which this is done be the Morning, in the decrease of the Moon, and in a clear and Serene Air. How to know when it is fit to do this Operation, we shall hereafter teach.

XII. The Cutting of Sarcocoele, or Hernia Carnosa, which is a fleshy Rupture. § 1. In the beginning when the Membranes of the Vessels are broke, eroded, or dilated, whereby too much Blood does Issue forth, Bleeding (Authors have said) is Good, as also Astringent and repelling Medicines. § 2. But, if it augments much, make a little Orifice to the Scrotum, and rather in the Superiour than the Inferiour part, through which by help of Pledgets let suppurating re-

remedies be applyed, that if possible the flesh may be wasted; and every dressing diligently wipe away the matter, but not all of it, that what flesh yet remains may the better be Consumed. § 3. *If this succeeds not, draw forth the Testicle, and by Incision cut off as much flesh, as you can, without doing Injury to it. Then restore it to its place, and the remainder of the flesh contrive to consume by Suppuration.* § 4. *But if the former ways prevail not, take out the Hernious Testicle, as far as you can, then pass once or twice a Silken Thread above the Tumour by the process of the Peritoneum, and pass both ends of the Silk through the Orifice itself; so that which was on the right side may be on the left, and that on the right: so tying the Process of the Peritoneum with a Knot, Cut off the Testicle, letting both ends of the Silk hang out of the Scrotum, then cure it as another Wound.* § 5. *But here you ought well to consider the Cause before you operate, for sometimes you may be deceived by a Scirrhus, Swelling of the Parastates: and sometimes the Spermatick Vessels are detained in the Scrotum, where oftentimes they may exceed in Magnitude the Testicles themselves, causing no other inconveniency but fear.* § 6. *Lastly, when you come to Operate, make the Ligature as near to the Tumor as possible: for the higher the Process of the Peritoneum is perforated, so much the thicker it is, by which the suppuration and falling of the Thread will be hindered, in*

which time if Convulsions follow, they foreshew Death.

XIII. The Cutting off of a Wen.
Cast a Thread small (but strong) twice round the Neck of the Tumor, and tie it with a double Knot, which must be daily straitened, till the Tumor be depraved of its Colour, Feeling and Life, which will be in about seven or eight days: then you may take it off with a Crooked Knife, which is easily performed, for that neither any great pain nor Flux of Blood is to be feared. *This Operation is best done in gross or flegmatick Bodies, in others, pain and Inflammation are so violent, that it will scarcely be indured: in such it is commonly removed at once by cutting, and then applying the Actual Cautery, after curing it as other Wounds.*

XIV. Removing of Warts.
Those with small roots, may easily be removed by tying them with a Thread, or nipping them off: those with broad roots may first be cut down or prickt, then removed by Medicines, as Potential Cauteries or dissolvents, or this: strew over them filings of Brass, which lay a Plaister, to keep them on.

XV. The Cutting of Corns.
Cut them round with the Point of your Knife, then tie them with a strong Thread, turning them with it every way as you cut them, by degrees Winding the Thread about them: thus continue to separate them till they are perfectly removed: after which if the place Bleed apply natural Balsam, or the Balsam of Lucatella, over which lay

Myrschits, Emplastrum Galbani Crocatum, mixt with a little *Sal Armoniack*: this you may lay also over Warts.

XVI. *Caruncles or Carnosities*

are taken away either by putting an Instrument in, and rubbing them, or by conveying a Caustick, or other proper Medicine to them, through an hollow Pipe.

CHAP. XVIII.

Of PROTHESIS.

I. *Prothesis* is that part of the Art, by which we are taught to restore or supply what is deficient: and this is chiefly exercised in the Cutting of Hare Lips, and making of Artificial Eyes, Nose, Teeth, Pallers, Tongues, Hair, Leggs, &c.

II. *A Hare Lip*, if it sticks to the Gums, as sometimes it does, must be divided from them by Cutting: after which, cut both sides of the Lip with a pair of sharp Sizars, so much as is necessary: then pass a Needle through, or two (as you see the occasion requires) which leave in, and Wind the Thread about them, as Taylors do when they stick them upon their skirts, anointing the Lips and Wound first with *Lucatella's* or *Spanish Balsam*, & putting Lint dipt in the same Balsam between the Gums and the Lip that is cut; this done you may (if you see need) strengthen it with the dry stitch, then cure it as other Wounds.

III. *Artificial Eyes* are commonly made of Glass, enamelled or painted, of which you may have three or four to put in and take

out at pleasure; *Artificial Nose*, may be made of Gold, Silver or Paper, Parchment, or Searcloth, artificially coloured, and stayed on with little Threads, ryed on the hinder part of the Head; or rather fixed with some sticking Plaster to the remaining part. *Artificial Ears* in like manner may be made of Paper, Parchment or Vellom, artificially coloured, and fastned on with a sticking Emplaster. *Artificial Teeth* are made with Ivory, and fastned both to one another and to the standing Teeth with Silver Wire.

IV. *Baldness* is artificially covered with Hair made into a Periwig. An *Artificial Pallat* is made of Gold or Silver Plate, about the thickness of a Crown piece, a little bigger than the Cavity it self, and in form of a dish, in the inner part of which must a little sponge be fastned, which is to be put into the Cavity of the *Lost Pollate*, by which means it will adhere thereto of it self.

V. *Artificial Arms, Hands, and Fingers*, must be made of strong Plates of Latin with many Wheels and Screws, to make a kind

kind of Motion, that they may be the more useful and then fixed to the Shoulder, Elbow, Wrist, &c. with strings. *Artificial Leggs, Feet and Toes*, are more commonly in use, but more especially Leggs : some of which are made in form of natural Leggs ; others all small

downwards, with a Seat, wherein is to be put small Boulders, for the Knee to rest on ; this from its Cup is to be fastned to the Thigh. *They that desire a more particular description of these substituted parts, ought to converse with the Artificer, by whom they may be further satisfied.*

CHAP. XIX.

Of DIARRHOIS.

I. **DIARRHOIS** is the reduction of parts, disordered by ill conformation, which is chiefly Crookedness in the Back, Arms, Leggs, Feet, and between the Joynts, often caused by the Rickets.

II. *Crookedness of the Back.* Before you offer to reduce it with a Steel Compress, or Bodies, mollify and soften the parts by Emollient and discussive Oyls, Unguents and Emplasters : then apply the Steel Bodies (made full of Holes for lightness sake) lined with Cotton that they may not hurt : These Bodies you must use gently, and straighten them by Degrees, for without their use, all other Medicines will be ineffectual ; by the use of them some have been restored in about eight or ten Months time or a year at farthest : as you perceive the reduction to come on, you must accordingly alter the Compress, that is to say, for such as are not come to their

growth : if the Patient is fully grown, you try this Operation in *Vain* : where the person was very Youthfull, I have often known this affect cured by swinging by the Arms and Armholes in a sling, and the Success was Wonderful ; sometimes also they have swung by the Neck, but this is much better for a Gibbosity of the Shoulder or where one shoulder grew higher than the other.

III. *Crookedness of the Joynts of the Arms and Fingers*, caused by defluxions, dislocations and Tumours, called by *Hippocrates Galengones*. They are difficult to Cure, but if caused by contractions of the Tendons and Muscles, the more easy. These Kind of affects are cured by an Instrument fitted for this purpose : so ordered as that first it may Crash the proeminent and convex part. 2. That it may scarcely touch the hollow, but rather defend it from Compression. 3.

C c 3 That

That it be so fitted to the part that it may hinder the Motion as little as may be.

IV. *Of the Instrument.* The Instrument is various according to the parts affected, but that which serves for the Elbow, may serve for the Wrist and Knee, which is thus: *make a Casket of Wood or Iron, in fashion of a Ring, and of such a breadth as may compass the whole Joynt: In that for the Knees, there must be a hollow for the Rotula, in the midst of the Casket must be a Screw, which is to pass into the Ring, the Ring also having Hinges by which it may open and shut; to the Casket put straps of Leather to fasten it, both above and below the Joynt. The Screw is made to bring gradually the Joynt into form. See the Figure thereof in Sculterus Table 18. Fig. I. and Table 43. at C.*

V. *Crookedness of the Leggs and Feet, are remedied by Boots,*

Splints, Boulsters and such like, fitted to the part: if the Feet be distorted or turned Inward; it is called Varis; if outward Valgus. In Varis bind the Ancles together, and put Boulsters between the great Toes: In Valgus, bind them close at the Toes, and put thick Boulsters between the Ankles and Heels: if they have been of long standing you must have half Cases from above the Knees to the Toes made of Steel, Brass, Wood, or Leather, to which fit Straps and Buckles to fasten them; one at the Gartering place, one a little above the Anckle, another where the Shoes are tyed.

VI. *Crookedness between the Joynts: If the Patient be young, it is Cured by the like means and Instruments; but they are commonly fitted to the Part that they may be serviceable and not troublesome. See Paræus Lib. 23. Cap. 10.*

CHAP. XX.

Of EMBALMING.

I. *K*νησις, ἡ Ἐνταφίς, Pollinctura, the Art of Embalming, is that which teaches to cleanse, sweeten, perfume and dry or preserve a dead Carcass or Body.

The Artist is call'd Ἐνταφιστής, ἡ νεκροκόμη, Pollinator, seu Pollinator, an Embalmer, or Preserver of Dead bodies. The Egyptians called him ἀλκυτής,

Salinator, A Salter; and the Art ἡ λισις, τὰ ἐλκεύειν, Salitura, The Art of Salting, because the Ancient way of Embalming in that Nation was by Salting or Powdering with Salt, as we shall now immediately Teach.

II. *Embalming is exercised either according to the Ancient Egyptian ways; Or, Our modern Institutions.*

III. The

III. *The Ancient Egyptian way of preserving the Dead, was either by Salting; Or, By Aromatick Gums and Spices.*

The Scythians eat their Dead; the Græcians burn; the Indians Anoint with Oyls and Fats; The Persians Bury; The Egyptians Embalm, and that either with Sales, or with Aromaticks, to keep the Body from stinking, putrifying or breeding of Worms, and (if it were possible) to make it Immortal: These Embalmed Bodies they call *Gabbares*. Their Opinion was, that so long as the Body endured, so long the Soul continued with it, therefore they Studied to preserve their Dead by Embalming, lest the Soul should quickly *transmigrate* to another Body. The Romans from a contrary Opinion burnt their Dead that their Souls might quickly be discharged, and return into their own Nature. *Herodotus* and *Diodorus Siculus*, tell us, That these Embalmed Bodies become as it were petrified and hard like Marble. *Augustin*, *de diversis*, Serm. 120. concludes from this their practice, that they held or believed the Resurrection of the Dead.

IV. *The Egyptian Art of Salination is threefold, viz. Esther by Salt alone: Or, by Salt and juice of Cedar: Or, by Salt and Aromatick Gums and Spices.*

Herodotus and *Diodorus* have very copiously Recorded the manner of Embalming; and how he that professes that Art, keeps patterns of dead Bodies; as also, that according as they

are paid they can embalm the Body, exact or not; and that those who would go to the price of it, might have their Dead done extream curiously. See *Herodotus*, lib. 2.

V. *Salination with Salt alone.*

This was only of Use with the poor people. The Dead body was carried to the *Salinators*, (for so they were called,) where the body being opened with a sharp *Ethiopick* Stone, with Lotions it was cleansed, and the Belly purely washt, then with *Niter* it was Salted seventy days, and after dried, in which Condition it would keep firm many Hundreds of years.

VI. *Salination with Salt and juice of Cedar.*

This was of Use among the middle or better sort of People. The *Salinator* forces up a *Clyster* by the *Anus*, of the Juice of Cedar, with which they fill (as it were) the Cavity of the Belly, neither cutting nor unbowelling; then they Salt it with *Niter* for seventy days compleat: at the end of that Term they take out the *Clyster*, and out with it comes the Guts, Ventricle, and other Internal *Viscera*; so powerful is the *Clyster* made of Juice of Cedar: In the mean season the *Niter* has consumed all the other superfluous humidities, having penetrated to the Bone; thus the Body being made thoroughly clean, it is after dried and put in its proper place, where it will remain without Corruption Multitudes of years.

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IV. *Of the Instrument.* The Instrument is various according to the parts affected, but that which serves for the Elbow, may serve for the Wrist and Knee, which is thus: *make a Casket of Wood or Iron, in fashion of a Ring, and of such a breadth as may compass the whole Joynt: In that for the Knees, there must be a hollow for the Rotula, in the midst of the Casket must be a Screw, which is to pass into the Ring, the Ring also having Hinges by which it may open and shut; to the Casket put straps of Leather to fasten it, both above and below the Joynt. The Screw is made to bring gradually the Joynt into form. See the Figure thereof in Sculterus Table 18. Fig. I. and Table 43. at C.*

V. *Crookedness of the Leggs and Feet, are remedied by Boots,*

Splints, Boulsters and such like, fitted to the part: if the Feet be distorted or turned Inward; it is called Varis; if outward Valgus. In Varis bind the Ancles together, and put Boulsters between the great Toes: In Valgus, bind them close at the Toes, and put thick Boulsters between the Ankles and Heels: if they have been of long standing you must have half Cases from above the Knees to the Toes made of Steel, Brass, Wood, or Leather, to which fit Straps and Buckles to fasten them; one at the Gartering place, one a little above the Ankle, another where the Shoes are tyed.

VI. *Crookedness between the Joynts: If the Patient be young, it is Cured by the like means and Instruments; but they are commonly fitted to the Part that they may be serviceable and not troublesome. See Paræus Lib. 23. Cap. 10.*

CHAP. XX. Of EMBALMING.

I. *Kηδεία, ἡ Ἐνταφίσις, Pollinatura, the Art of Embalming, is that which teaches to cleanse, sweeten, perfume and dry or preserve a dead Carcass or Body.*

The Artist is call'd Ἐνταφιαστής, ἡ νεκροῦς, Pollinator, seu Pollinator, an Embalmer, or Preserver of Dead bodies. The Egyptians called him ἁλυντής,

Salinator, A Salter; and the Art ἁλίσ, ταφίς, Saltura, The Art of Salting, because the Ancient way of Embalming in that Nation was by Salting or Powdering with Salt, as we shall now immediately Teach.

II. *Embalming is exercised either according to the Ancient Egyptian ways; Or, Our modern Institutions.*

III. *The*

III. *The Ancient Egyptian way of preserving the Dead, was either by Salting; Or, By Aromatick Gums and Spices.*

The *Scythians* eat their Dead; the *Græcians* burn; the *Indians* Anoint with Oyls and Fats; The *Persians* Bury; The *Egyptians* Embalm, and that either with Salts, or with Aromaticks, to keep the Body from stinking, putrifying or breeding of Worms, and (if it were possible) to make it Immortal: These Embalmed Bodies they call *Gabbares*. Their Opinion was, that so long as the Body endured, so long the Soul continued with it, therefore they Studied to preserve their Dead by Embalming, lest the Soul should quickly *transmigrate* to another Body. The *Romans* from a contrary Opinion burnt their Dead that their Souls might quickly be discharged, and return into their own Nature. *Herodotus* and *Diodorus Siculus*, tell us, That these Embalmed Bodies become as it were petrified and hard like Marble. *Augustin*, *de diversis*, Serm. 120. concludes from this their practice, that they held or believed the Resurrection of the Dead.

IV. *The Egyptian Art of Salination is threefold, viz. Either by Salt alone: Or, by Salt and juice of Cedar: Or, by Salt and Aromatick Gums and Spices.*

Herodotus and *Diodorus* have very copiously Recorded the manner of Embalming; and how he that professes that Art, keeps patterns of dead Bodies; as also, that according as they

are paid they can embalm the Body, exact or not; and that those who would go to the price of it, might have their Dead done extream curiously. See *Herodotus*, lib. 2.

V. *Salination with Salt alone.*

This was only of Use with the poor people. The Dead body was carried to the *Salinators*, (for so they were called,) where the body being opened with a sharp *Ethiopick* Stone, with Lotions it was cleansed, and the Belly purely washed, then with *Niter* it was Salted seventy days, and after dried, in which Condition it would keep firm many Hundreds of years.

VI. *Salination with Salt and juice of Cedar.*

This was of Use among the middle or better sort of People. The *Salinator* forces up a Clyster by the *Anus*, of the Juice of Cedar, with which they fill (as it were) the Cavity of the Belly, neither cutting nor unbowelling; then they Salt it with *Niter* for seventy days compleat: at the end of that Term they take out the Clyster, and out with it comes the Guts, Ventricle, and other Internal *Viscera*; so powerful is the Clyster made of Juice of Cedar: In the mean season the *Niter* has consumed all the other superfluous humidities, having penetrated to the Bone; thus the Body being made thoroughly clean, it is after dried and put in its proper place, where it will remain without Corruption Multitudes of years.

VII. *Salination with Salt and Aromatick.*

The *Salinator* Extracted the Brain by the Nostrils with a Hook, then he filled it with dissolved Gums, after that, with a sharp *Ethiopick* Stone, he ript up the Belly, and unbowelled it, which was immediately washed and cleansed with *Palm Wine*; and filling the whole Cavity of the Belly with Aromatick Spices, Myrrh and Cassia, (*but no Frankincense*) it was sewed up, and then Salted with Niter for seventy days; at the end of which time it was cleansed, washed and dried. This done, it was bound with Fillets or Ribands, beginning at the Head, and ending at the Feet, and then going again from the feet to the head, to the wrapping up (as the *Historian* saith) of a Thousand Ells, after which it is wrapt up in a *Sear-Cloth* dipt in melted Gums and Rosins.

VIII. *The Egyptian Embalming with Aromaticks alone.*

The Artist that is to Dissect the Belly is called the *Scribe*; he lays the Body upon the Ground, and marks out how much of the Belly must be cut open about the left side; this Section is performed with the sharp *Ethiopick* Stone. The *Entrails* are presently flung away by their Law, being pulled out by the hand of the *Embalmer*; but the *Heart* and *Kidnies* are cleansed with Wine of *Palmes* and Aromaticks, and kept. This done, the whole Body is anointed with Juyce of Cedar for about forty days (the number of the days of their mourning for the Dead;) Afterwards they

perfume the Body with Myrrh, Cinnamon, Aloes, and other Aromatick Gums, Spices and Oudours, in such sort, that (as their *Historians* report,) the Hair shall be preserved and renew Hundreds of years; and every Member kept so intire, that the Eye-brows, Beard and Countenance, and shape of the whole Body may easily be known by any that knew them in their life-time. *Diodorus Siculus*, lib. I.

IX. *The Modern Ways of Embalming are either General or Special.*

X. *The General, are such as are universally practised through most of the European Nations, and these are either without Dissection, or with it.*

Those which are Embalmed without Dissection, cannot be of that endurance, which they are of who are Dissected; Nor are those Bodies useful for *Mummies*. The name of *Mummy* is only given to Dissected Bodies, Embalmed with Aromatick Drugs; Or, to those Bodies which are covered over, and dried in the Sands of *Lybia* by the heat of the Sun. It is improperly given either to the Liquor which flows from the Cossins of Princes Embalmed, which being dried in the Sepulchre, becomes hard as the Embalmed Flesh; Or, to those Bodies which are Embalmed with *Aspalthum* or *Bitumen*. (which is a Sulphurous Humidity of the Earth) which through length of time being once dry, becomes like Mortar, or a Crusted Paste over

over the Body. The Coffins of the Egyptians were shaped out to the Similitude of a man; and if they were made of Wood it was Sycomore or Cedar, which are Reported will remain sound for Ever.

XI. Embalming without Dissection, called Encearing.

You ought to cleanse the Bowels well by Clysters cast in, made either of Wine Vinegar, Sea Water, Salt Brine, or Solution of Niter, or a strong Decoction of Coloquintida; and these to be often repeated; then hanging the Body up by the Arms that the Ordure or Fæces may drop out: If the Body be laid in warm Water almost scalding hot, for a Season after the Exhibition of the Clyster, it will work so much the better. The Bowels being cleansed, let all the passages of the Body be stoppt up with hürds dipt in the Composition prepared for the Cerecloth, and over them lay Cloth fitted, and dipt in the same; lastly, wrap up the Body in a Cerate made of New Cloth; so large as it may go 4 or 5 or more times round the Body, as you think fit; and then Cord it up, putting it into a strong well made Coffin, well and firmly Pitcht all over the Inside. But here note § 1. that in thin and lean Bodies, it is not always necessary to use the Clysters, being chiefly for Fat and Gross Bodies; § 2. That some Cord not the Body, being wrapt in the Cerecloth; but it is most safe to use Cordage if the Body be very Fat and Gross. § 3. That the Cerat for this purpose you

may see in Our Doron or Supplement to Our London Dispensatory, Lib. 3. Cap. 5. Sect. 1. 2. Or you may use this following, R Burgundy Pitch lb xij. Bees Wax lbv. Pitch lb j. Franchincense, Gum Elemi, Verdigrise, A. lb ss. Oyl q. s. melt, mix and make a Cerat. Or this, R Bees Wax lbxx. Rosin, Sheeps Suet, Stone Pitch, A. lb x. Turpentine lbvj. Oyl enough to give it the body of a Cerate.

XII. The Modern way of Embalming with Aromatics.

§ 1. Have in a readiness for Dissection all the proper Instruments, Incision Knives, Saws, &c. as also Spunges, Stuphes, Linnen, Needles, Waxed Thread, Bandages. § 2. Embowel the Corps, removing all the Viscera or contained parts in the three Venters, except the Heart and Kidnies, which may be Embalmed with the Body. All these Bowels you may put in an Urne or pot, and Bury them by themselves. § 3. The Venters being all freed, dry them very well with Spunges and Cloths; and then wash them with Water and Salt, Or Vinegar. Or Salt and Vinegar, Or Aqua Vitæ, Or Spirit of Wine, Or Lixivium of Quicklime: and if you would have the Body keep for a longer time, make Incision into the inside of the Thighs, Arms and other Fleishy parts, where the greater Vessels lye, that the Blood may be extracted, and so you may do if you please to the whole body; after which dry and wash it, as we have just now directed; lastly wash it with Vinegar

negar in which *Colocynthis*, *Wormwood*, *Rue*, *Aloes*, *Salt* and *Alum* have been Infused and Decocted. § 4. *Then done*, fill the said Venter and Incisions with this Powder. Pulvis ad Implendas Cavitates Cadaverum. R. *Acorus*, *Orrice*, *Birthwort*, *Rhodium*, *Xyloaloes*, *Gentian*, *Zedoary*, *Bay berries*, *Ginger*, *Cardamoms*, A. ℥iij. *Myrrh*, *Aloes*, A. ℥xv. *Leaves of Wormwood*, *Centory*, *Mistertwort*, *Rosemary*, *Pepper*, *Cinnamon*, *Cloves*, *Nutmegs*, *Labdanum*, A. ℥ij. make all into a powder, and moisten with Spirit of Wine to embody it, all which will be little enough if the Body be large, and you Embalm the Bowels also; for you ought not to leave the least cavity unfought, but fill every Corner as full as the Skin will hold. § 5. *The Venters being filled*, Sew up all the places, and Anoint the Body all over with first Oyls of *Turpentine*, *Spike*, *Juniper Berries* and *Cloves* mixt together in equal quantities: Secondly with *Balsam of Peru*; which done, strew over the whole Body some of this following Powder, till it be about half an Inch thick. Pulvis ad Cadavera Loricanda. R. *Myrrh* Elect, *fine Aloes*, *Benjamin*, *Gum Guajaci*, *Orrice root*, *Acorus*, *Cloves*, *Cinnamon*, *Tacamahacca*, *Lignum Rhodium*, *Bayberries*, A. ℥ij. make all into a powder and mix them. § 6. *The next thing you are to do* is to wrap up the body in Cearcloths, so large as may go 3, 4, or 5 times round it; the form of the Cerecloth you have above at S. F. II. § 3. or others (in my Opinion better) in Our

Doron lib. 3. cap. 5. sect. 1. 2. § 7. Lastly, put up the Body into the Coffin, which if it be of Wood let it be exceedingly well Pitched all over within: if of Lead, let it be fouldred up: after having first filled up all the Empty spaces with either of the Powders at § 4. or 5. aforementioned.

XIII. Another way to do the same.

§ 1. *Open the Scull behind*, about the breadth of the Palm of an hand, something more or less; take out the Brain and fill the Cavity with this Powder. R. *Myrrh*, *Aloes*, A. ℥xv *Benjamin*, *Tacamahacca*, *Gum Guajaci*, *Labdanum*, A. ℥lv. *Roots of Orrice*, *Gentian*, *Ginger*, *Zedoary*, *Aristolochy round*, *Bayberries*, *Acorus*, *Asphaltum*, *Cloves*, *Cinnamon*, A. ℥iij. mix and make a Powder. Then put on the piece of Scull again, and sew it fast on. § 2. *Make an Incision* from that part of the Breast where the Ribs meet above the Navel, and another Incision crossing it about 18 Inches long, so as to lay open the Region of the Liver; Spleen and Stomach: separate the whole from the Sternon on both sides in the Muslaginous parts, raise the Sternon against the face of the Body; take out the Tongue, Eyes, Lungs, Heart, Liver, Spleen, Stomach, Intestines, and all the contained parts: make also two or three Incisions all along each Arm and Leg; and deep Incisions in the Buttocks and Thighs; as also from the Neck to the Buttocks on the Back, separating

ting

ting the skin and fat parts with an Incision Knife: *Lastly*, make five or six Incisions in the Neck, two in the Soles of each Foot, and as many in the Palms of each hand. § 3. *Suck up the Blood and Watery Humors with Sponges*, Bath and Wash the parts with good Spirit of Wine; after rub with good Spirit of Salt; and then fill every hole and Corner, and all the Incisions and spaces between the skin and flesh, as also the Mouth, Eye-holes, Nostrills, and whole Cavity of the Body, as full as the skin will hold, with the Pouder at § 1. and sew up the skin firmly with Thread well Waxed. § 4. *This being done, Anoint the Body all over with Balsam of Peru*, strewing it over with the pouder at Sect. 12. § 5. above. § 5. *Then wrap the Body in a Cerecloth*, and sodder it up in a Leaden Coffin, where it may be preserved for many Ages. § 6. *If you would preserve the Body for some time to lie in State*, where it may be apparelled with Linnen, Cloths, Hose, Shoes, Gloves, &c. with the Head and Face uncovered; you must prepare a white Linnen Odoriferous Cerecloth, which cut into long Bandages of about 2 or 3 Inches broad. with which swath the Arms, Legs, Thighs by themselves, and afterwards the whole body, applying the Swaths astant upon the Pouder; upon which you may Cloth the Body as if it were Living, and Comb out the Hair; often wash the Face with S.V. rectified, and lay over it, when it is not publickly exposed, double

Linnen Cloths dipt in the same, or a portion of the said odoriferous cerecloth, which for this purpose may be thus made. *℞ White Bees Wax lb viij. Venice Turpentine lb si. Oyl of Nutmegs by Expression ℥ iv. Distilled Oyls of Orange Peel, of Limon Peels, of Rhodium, A. ℥ ij. melt, mix, and make a Cerate.*

XIV. *A special and particular way of Embalming, most excellent.*

§ 1. *Embowell or remove all the Contained parts in all the three Venters as aforesaid, making also fit Incision in all the fleshy parts, and wherever any of the great Vessels lye.* § 2. *Then don, and the whole Body wiped very dry and thoroughly cleansed; lay it for 3 or 4 hours in very warm water, till the water is well colored; pour that Water away and put in fresh, letting the Body be in it as long; cast that water away and this Work repeat till the Water will be no more coloured.* § 3. *Afterwards you shall dry the Body very well with Cloths and Sponges, and lay it so, as that all that can may drain out of it, then put it into good Spirit of Wine, so much as to overtop it for 3 or 4 fingers breadth; wherein let it lye for 48 hours: pour off that Spirit, and affuse new, letting it lye 48 hours as aforesaid; this work repeat so long till the Spirit will be no more colored.* § 4. *Then take fresh Spirit of Wine, to every Pint of which put an Ounce of the best Oyl of Vitriol, Oyl of Sulphur, Or Oyl of Salt, mix them well together, and pour them upon the*

the whole body as you poured the former Spirit, in which let it lye 24 hours, after which decant the liquor, and with what Care you can, very curiously dry the Body in all its parts. § 5. *Being well dried,* Balmear it all over both within and without, with a Hogs bristle Brush, with this following Liquor. *R. fine Myrrh, Benjamin, Resin, A. ʒiv. Rectified Spirit of Wine enough to dissolve the biggest part of the aforesaid Resins, in a gentle Sand heat: this dissolution mix with half its quantity of the solution of fine Aloes in other rectified Spirit of Wine; for the*

aforesaid Use: you may do it twice a day all over with the said Brush for eight or ten days together. § 9. These ten days being over, fill the Capacities of all the Ventracles with the Poulder at Sect. 13. § 1. and anoint the outside of the Body all over with *Balsam of Peru*, which done, Wrap it in the Cere Cloth at Sect. 13. § 6. The Body being thus embalmed, will keep some thousands of years without any decay. § 7. *Lastly, put it into the Coffin or Tomb prepared for it, observing the Directions at Sect. 12. § 7.*

CHAP. XXI. *Arca Chyrurgica,* *seu Cista Militaris; The Chyrurgians Chest.*

I. **T**HAT we might as well fit the Camp as the Court, and as well accommodate the Physician by Sea as by Land, we thought good here to exhibit several *Repositories* according to the Institution of the most excellent and approved men Learned in this Art: The first which we shall here present you with, shall be the *Cista Militaris* of the Famous *Gulielmus Fabricius Hildanus*. The second shall be the *Vitacium* of that Able Chyrurgian *John Wardall*, our Countryman. The third shall be an Institution of *Our own*, which we wrote some years since, at the re-

quest of a Worthy and Ingenious man of Our own Nation.

II The reason of all this Variety is to satisfy the Curiosity of the Industrious Student of Our Art; for as much as the Institutions of One man, which may please one Artist, may displease another; we have therefore exhibited this variety, that by various Exemplars of this kind, if nothing which we shall here say, can please, or be without exception; the Judicious Professor may from hence take an Exemplar, and furnish his Repository with such things as may best fit his Intentions, or Answer his desired

red End. For as all men are not alike wise, so no one man can know all things: every Artift may have some one particular Secret or another (not known to any mortal besides) for which he may have a particular estimation, and with which he desires his Chest to be furnished; so also his Judgment or Experience, or both, may lead him to chuse several things which we have rejected, from his certain knowledge of their more powerful effects; and to reject many things which we have chosen, from his own knowledge of the imbecility of their Powers, being compared with those he intends to substitute.

III. *In all these Cases every man is left free*: nor do I know any reason why any man should be bound up to things Opposite to his Knowledge. For this Cause sake I here shew you variety: for, as much as others may differ as much from us, as we here differ one from another.

I. CISTA HILDANI.

IV. *Purging Simples.* Agarick. Aloes. Rhubarb. Cassia. *Crocus Metallorum.* Colocynthis. Diagridium. Sena. Hermodacts. Manna. Mecoachan. Myrobalsans. Juyce of Damask Roses. Troches Alhandal. Turbith.

V. *Purging Compounds.* Benedicta Laxativa. Confectio Hammech. Dicarthamum. Diaphenicon. Diaturbith. Electuarium de Succo Rosarum. Electuarium Lenitivum. Pulvis Senæ Brassavoli. Syrup of Roses

solutive. Pilulæ aggregativæ, Pilulæ Aurææ. Cochæ. de Agarico. Lucis majoris. Ruffi. Extractum Rudij. Species for Suppositories.

VI. *Cordial Pouders and Eleuaries.* Aromaticum Rosatum. fine Bole. Camphir. Confectio Alkermes. Confectio de Hyacintho. Coral prepared. burnt Harts horn prepared. Crem of Tartar. Diaireos. Diamargariton frigidum. Diarrhodon abbat. Diatragacanthum frigidum. Diatrion Santalinum. Flos Sulphuris. Bezoar Stone. Pearl prepared. Mithridate. Meconium, Opium, Laudanum Opium. Osteocolla prepared for inward use. Philonium Romanum. Pulvis ad Epithemata Cordis. Harts horn rasped. Lapis prunellæ. Tartar Vitriolate. Terra Sigillata. London Treacle. Venice Treacle, Diatessaron.

VII. *Aromatick Species.* Calamus Aromaticus. Cloves. Cinnamon, Saffron. Galingal. Mace. Nutmegs, Pepper, Ginger, Sugar.

VIII. *Waters Distilled.* Of Sorrel. Aniseed. Borrage. Bugloss. Marigolds, Cinnamon Distilled without Wine. Bawm. Plantane. Roses. Aqua Vitæ. Wormwood water. Mint-water. Treacle-Water. of Juyces of Barberries. of Citrons. of Pomegranates. Wine Vinegar, Vinegar of Roses.

IX. *Syrups.* Of Sorrel. unripe Currans. Barberries, Bugloss. Citrons. Quinces. Pomegranates. Limons. Liqueurice. Poppies. Red Roses. dried Roses. Violets. Honey

ney of Roses, Oxy-mel Symples and with Squills. Diamorum.

X. *Roots.* Of Althæa. Angelica, Birthwort long. round. Bistort. Bryony. Avens. Onions. Succory. Comfry. Sow bread, Elecampane. Eringo. Fennel. Gentian. Swallowwort. Orrisy. White Lillys. Liquorice. Parsly. Burnet. Plantane. Polipody. Squills. Tormentil.

XI. *Herbs or Leaves.* Wormwood common. Romane. Agrimony. Ladies Mantle. Jack by the Hedge. Althæa. Betony. Carduus Ben. Centaury. Knot-grass. Cuscuta. Dittany of Crete. Horse-tail. Eye-bright. Fumitory. Hypericon. Marjoram. Bawm. Mint. Mercury. Nep. Origanum. Plantane. Self heal. Winter green. Ribwort. Rosemary. Rue. Sage, Sanicle. Scabious. Scordium. Golden Rod.

XII. *Flowers* of Betony. Borrage. Bugloss. Camomil. Dill. Elder. Marigolds. Melilot. Mullein. Pomgranates. Primrose. Roses. Rosemary. Sage. Violets.

XIII. *Seeds.* of Anise. Coriander. Carraways, Cumin. Dill. Fœnugreek. French Barly. Line. Parsly. Plantane. Quinces. Radish. Mustard.

XIV. *Fruits.* Almonds, Bayberries, Acorns. Acorn Cups. Figs, Preserved Cherries. Quinces. Galls. Cypress nuts, Oranges. Limons. Pomgranates. Lupins. Myrtle Berries. Rose-hips. Prunes. Tamerinds. Raisins.

XV. *Oyls Natural and Artificial.* Of Almonds sweet, bitter, Dill. Aniseeds. Balsam of To-

lu. Vigo's Balsam. Oyl of Carraways. Cloves. Wax. Camomil. Cinnamon. Quinces. Fennel Seed. Hypericon. Juniper Berries. White Lillyes. Earthworms. Mastich. Mint. Myrles. Nutmegs, Olives. Roses. Scorpions, Turpentine. Violets. Yolks of Eggs, Petroleum, Foxes, Elder. Linfed.

XVI. *Oynments Simple and Compound.* Ægyptiacum. Album Rhafis. Apostolorum, Aureum. de Minio Camphoratum. defensivum Chalmetæi, Dialthææ. Diapompholigos. Nicotianæ. Populeon. Rosatum. ad Ambusta Hildani. Basilicon. Linimentum Arcæi. Martiatum.

XVII. *Fats, Suet or Grease.* of Geese. Beef. Capons. Deer. Goats, Men. Hens, Hogs. Bears.

XVIII. *Emplasters.* Apostolicum. Basilicum. de Betonica Diapalma. Diachylon simplex. Diachylon compound. de Meliloto, de Mucilaginis. Oxy-croceum. de Ranis. Paracelsi.

XIX. *Gums and Rosins.* Ammoniacum. Benjamin. Wax. Colophony. Elemi. Euphorbium. Mastich. Myrrh. Olibanum. Pitch. Styrax Calamita. Turpentine. Tragacanth.

XX. *Minerals and such like.* Alum crude. Alum burnt. Antimony crude. Arsenick. Lime washed. Ceruse. Crocus Martis. Gypsum. Lapis Calaminaris. Lapis Causticus. Medicamentosus Crollij. Sabulosus. Litharge of Gold. of Silver. Quicksilver. Mercury Sublimate. præcipitate. Nil præparatum. Niter crude. prepared. Burnt Lead. Realgar. Seif,

Seif album. Brimstone. Tutia prepared. Vitriol crude. Vitriol burnt.

XXI. *Meals or Flowers.* of Bay berries. Beans. Barley. Lentills. Darnel. Lupins. Wheat. Millduft. Pouder stopping Blood.

XXII. *Small Instruments for the Pocket.* 1. A Plaister Box. 2. A Raifor. 3. A pair of Sciffars. 4. Incision Knife. 5. Four Lancets. 6. A Crooked Knife to open Apostems. 7. A Fleam to divide the Gums with in the Tooth-ach. 8. An Extractor to take things out of Wounds. 9. A pair of Forceps for the same use. 10. Needles great and small to stitch up Wounds. 11. A stitching Quill. 12. Spatula's great and small. 13. Probes. 14. Speculum Oris, one end whereof is to deprefs the Tongue, the other to scrape it. 14. Uvula Spoon. 15. A Burax quill, to sprinkle Pouders on Wounds or Ulcers. 16. A Hook single at one end, double at the other. 17. A small Hone to set the Incision Knives and Lancets.

XXIII. *The Salvatory* furnished with 1. Unguentum Basilicum. 2. Aureum. 3. Apostolorum. 4. Nutritum. 5. Album Rhafis. 6. de Minio, or deficcativum rubrum.

XXIV. *Large Instruments for the Chest,* 1. Trepan. 2. Levatories. 3. Scalpra's. 4. Great Speculum Oris. 5. A Speculum Oris to force open the mouth. 6. Tooth Drawers. 7. Forceps to draw forth Bullets. 8. Great Saw for Amputation. 9. Little Saws for dis-

membring Fingers and Toes. 10. Amputating Knife. 11. Crooked Knife. 12. Cauterizing Knife. 13. Catheters. 14. Syringes. 15. Parreus his Pully with Girdle and Remora, for reducing broken Bones and Dislocations. 16. Clyster Pipes 17. Mortars. 18. Strainers or Sives. 19. Skillets. 20. Splints. XXV. *Accessaries.* Linnen cloth. Linnen rowlers. Boulsters. Tow Pledgers of Tow. Lint. Tents of Lint. Tents of Gentian Roots. Spunges. Ox-bladders. Thus far *Hildanus*.

II. WOODALL'S VIATICUM.

XXVI. *Large Instruments.* 1. Incision Knives. 2. dismembring Knives. 3. Catlings. 4. Raifours. 5. Trepan. 6. Trafine. 7. Levatories. 8. Head Saws. 9. Disemembring Saws. 10. Disemembring Nippers. 11. Chizel and Mallet. 12. Speculum Oris. 13. Speculum Oris with a Screw. 14. Speculum Lingua. 15. Speculum Ani. 16. Cauterizing Irons. 17. Storks Bills. 18 Ravens Bills. 19. Crows Bills. 20. Terebellum. 21. Incision Sheres. 22. Probes or Flammules. 23. Spatula's great and small. 24. Spatula Mundani- [25. for Teeth, Paces. 26. Pullicans. 27. Forcers or Punches. 28. Crows Bills. 29. Fleames. 30. Gravers. 31. Small Files.] 32. a Bundle of small *German* Instruments. 33. Clyster Syringes. 34. Small Syringes. 35. Catheter. 36. Wax Candles. Those for the Lid of the Chest, till

till the Chyrurgian see cause of removal.

XXVII. Salvatory, furnished with the aforementioned usual Oyntments, specified at Sect. 23.

28. Pocket Instruments. 1. Plaster Box. 2. Scissers 3. Forceps. 4. Spatula. 5. Capital Instrument. 6. Probe. 7. Stitching Quill. 8. Needles. 9. Lancers. 10. Borax Pipe. 11. Levatory. 12. Uvula Spoon.

XXIX. Accessories. Cupping Glasses. Brass Basin. Blood Porrengers. Diet pot. Skillet. Chafing Dish. Clyster pot. Funnel. Cups to give Potions in. A Board to spread plasters on. Pestell and Mortar. Weights and Scales. Sives. Searces. Strainers. Splints. Junks. Tape. Tow. Sponges. Clouts. Rowlers. Paper White. Brown, Empty pots. Glasses. Needles and Thread. Wax Candles. Lanthorn. Tinderbox furnished. Ink. Quills. Close Stool. Bed Stool. Brass Pail. Bricks to heat. Pipkins. Empty Bags. Skins of Leather.

XXX. Emplasters. Sticticum Paracelsi. Diachylon cum Gummis. Diachylum simplex. Diacalciteos. Oxycroceum. de Meliloto pro splene. de Meliloto simplex. de Lapide Caliminari. de Minio. Calidum.

XXXI. Oyntments. Basilicon. Apostolorum. Aureum. Ægyptiacum. Album Camphoratum. Diaphompholigos. Pestorale. Rosarum. Nutritum. Populeon. De mele & sapo contra Ignem. contra Scorbutum. Dialthææ Compositum. Simplex. Potabile. Mercurij. Linimen-

tum Arcæi. Aragon. Martiatum. Axungia Porcinæ. Cervi. de Melle Simplex.

XXXII. Waters or Liquors. Aqua Composita. Cœlestis. of Dr. Stephens. Rosa Solis. of Cinnamon. Limons. Rosemary. Sassafras. Aniseed. Wormwood. Bawm. Angelica. Mint. Carduus. Treacle water. [Simple of Damask Roses. red Roses. musked. Plantane.] Aqua Fallopij. Aqua Viridis. Aqua Fortis. Lotions. Lixivium strong and common. Wine Vinegar. Vinegar of Roses. Verjuyce. Liquid Caustick.

XXXIII. Spirits. of Wine. of Vitriol. of Turpentine.

XXXIV. Salis. of Wormwood. of Niter. Sal Gem. Lapis Infernalis.

XXXV. Oyls Galenical. of Roses. Dill. Camomil. Worms. Lillyes. Hypericon simple. cum Gummis. of Elder. of Linseed. of Eggs. Bays. Wormwood. Poppies. Scorpions. Sweet Almonds. bitter Almonds. Petroleum. Balsam natural. artificial.

XXXVI. Oyls Chymical. Of Vitriol. Sulphur. Cloves. Cinnamon. Mace. Bricks. Anise. Turpentine. Juniper. Spike. Antimony. Amber. Wormwood. Origanum.

XXXVII. Syrups. of Wormwood. Limons. Poppies. Cinnamon. Roses simple. Solutive. Violets. Oxymel Symples. Honey of Roses. Diamorum. Horse Radish. Prunella's.

XXXVIII. Conserves. of Roses. Rosemary flowers. Barberries. Quinces. Wood Sorrel. Sloes.

XXXIX. Elea

XXXIX. Eleſtuaries. Catholick Extract purging. Extract of *Rudus*. Diacatholicon. Diaphenicon. Diaprunum. Confectio Hamech. de Succo Roſarum. Diatrion. Piperion. Theriac Londonenſis. conſectio Alkermes de Ovo. Mithridatum. Venice Treacle. Diateſſaron.

XL. Opiates. Laudanum Paracelli. Diaſcordium. Diacodium. Philonum Romanum. Perſicum. Tarſenſe. Aureæ. Alexandrinæ.

XLI. Juyces. Of Wormwood. Liquorice. Limons. Pulp of Tamarinds. Acacia.

XLII. Pills. of Agarick. Aureæ. Cochix. de Euphorbio. de Cambogia. Ruſſi.

XLIII. Troches. of Wormwood. Alhandal. de Spodio de minio.

XLIV. Pouders. Aurum Viræ. Pulvis Sanctus. Arthriticus.

XLV. Purging ſimples. Sena. Rhubarb. Agarick. Scammony. Aloes. Hermodacts. Polypody. Euphorbium. Turbith. Myrobalans. Cambogia. Caſſia Fiſtularis.

XLVI. Simples Alteratives. Saffron. Opium. China. Sarſa. Saffraſas. Guajacum. Cortex Guajaci. Liquorice. Common Barly. French Barly. Aniſeeds. Fennel ſeeds, common. Sweet Carraways. Cummin ſeed. Parſly ſeed. Line ſeed. Fenugreek Seed. Dill Seed. Poppy Seed. Planrane ſeed. the 4 greater cold Seeds, the 4 leſſer. Sugar. Almonds. Raiſins. Starch. Sumach. Galls. Bayberries. Juniper Berries.

XLVII. Spices. Cinnamon. Mace. Pepper. Cloves. Nutmegs.

XLVIII. Gums. Camphir. Guajaci. Opoponax. Bdellium. Ammoniacum. Sagapenum. Galbanum. Myrrh. Maſſich. Labdanum. Stryax Calamita. Liquida. Benjamin. Tragacanth. Ship Pitch. Roſin. Amber. Sanguis Draconis.

XLIX. From Animals. Ivory Harts horn. Wax. Mummy. Album Græcum. Sperma Ceti. Wolfs Blood. Cantharides. Spodium.

L. Minerals and Earths. Antimony crude. Stribium. Sulphur. Roch Allum. Burnt Alum. Vitriol common. White. burnt. Lapis prunellæ. Venetian Ceruſe. Litharge. Viridigriſe. Tutia. fine Bole. common Bole.

LI. Flower or Meals of Wheat. Beans. Barly. Bran. Flower. White Starch.

LII. Herbs moſt fit to be choſen. Roſemary. Marjoram. Mint. Melilot. Sage. Time. Wormwood. Carduus Ben. Bawm. Savin. Scordium.

LIII. Roots. Of Althæa. Horſe radish. Pyrethrum. Angelica. Comfrey.

III. WOODALL'S EPI- TOMY.

LIV. Instruments. 1. Diſſem-
bring Saw. 2. Diſſembring
Knife. 3. Inciſion Knife. 4. Head
Saw. 5. Trefine. 6. Clyſter
pot. 7. Clyſter Pipes. 8. Small
Syringes with Pipes. 9. Cath-
eter. 10. Speculum Oris. 11. Cat-

terizing Buttons. 12. Flamula. 13. Forceps straight. 14. Forceps crooked. 15. Paces for Teeth. 16. Forcers or Punches. 17. Crows Bills. 18. Spatula's. 19. Weights and Scales. 20. Pestle and Mortar. 21. Strainers. 22. Spunges. 23. Skillets. 24. Chafing dish. 25. Pankin. 26. Chizel and Mallet. 27. Blood Porringers. 28. Cupping-Glasses. 29. Potion Cup. 30. Large Spoon. 31. Tow. 32. Funnels. 33. Cap paper. 34. Skins of Leather. 35. Large Skillet. 36. Clouts and Roulers. 37. Bladders. 38. Bags. 39. Pots. 40. Glasses.

LV. *Emplasters.* Stricticum Paracelsi. Diacalciteos. Oxycroceum. de Minio. de Meliloto de Cumino.

LVI. *Oynments.* Basilicon. Viride. Populeon. Album. Triapharmacum. Dialthææ. Diapompholigos. Egyptiacum. Linimentum Arcæi. digestive. Mel Saponis. Hogs Lard.

LVII. *Oyls Galenical and Chymical.* of Whelps. Hypericon with Gums. Roses. Camomil. Dill. Lillies. Linseed. Chymical Oyls of Vitriol. Turpentine. Origanum.

LVIII. *Pouders.* Restrings majus. defensive. Pulvis Sanctus. Arthriticus. Barly Meal. Bean meal. Aurum Vitæ.

LIX. *Herbs.* Wormwood. Mint. Rosemary. Time. Centaury. Hypericon. Scordium.

LX. *Syrups.* of Violets. Limons. Mint. Roses Solutive. Diamorön. Oxy-mel. Mel Rosarum.

LXI. *Conserves.* of Roses.

Sloes. Barberries. Scurvigrass.

LXII. *Electuaries.* De Ovo. Diastordium Mithridatum. Philonum Persicum. Venice Treacle. London Treacle. Treacle Diatefferon. Confectio Hamech. Confectio Alkermes. Diatrion piperion. Diacatholicon. Diaphenicon Lohoch Sanum. Laudanum. Aquilla Vitæ. Catholick extract purging.

LXIII. *Pills.* de Euphorbio. Ruffi. Cochæ. Auræ.

LXIV. *Liquids.* Aqua Cœlestis. Cinnamomi. Rosarum. Mint. Carduus ben. Plantane. Aqua vitæ. Angelicæ. Lotions. Spirit of Wine. Wine Vinegar.

LXV. *Purging Simples.* fine Aloes. Sena. Rhubarb. Colocynthis. Cambogium. Stibium.

LXVI. *Simples.* fine Bole. common Bole. Lapis Calaminaris. Alum crude. burnt. Vitriol white green. burnt. Precipitate. Sublimate. Ceruse. Juyc of Liquorice. Juyc of Limons. Mastich. Myrrh. Greek Pitch. Opium. Turpentine. Lupines. Pomgrate Peels. Galls. Roots of Liquorice. Seeds of Anise. of Fennel. of Cumin. of Line. of Fenugreek. Bayberries. Juniper berries. Barly Common. French or hulled. Flowers of Camomil. of Melilot. Cantharides. Harts horn rasped. Harts horn burnt. Mummy.

IV. SALMON'S REPOSITORY.

LXVII. *Roots.* Asarum. Althæa. Birthwort round. Contra yerva. Elecampane. Gentian. Ginger.

ger. Garlick. Hermodacts. Hel-
lebor black. White. Jallap. Li-
quorice. Meccaachan. Orrice.
Onions. Rhubarb. Squills Spick-
nard. Turmeric. Turbith. Vir-
ginian Snake root. Zedoary.

LXXVIII. *Barks.* Cinnamon.
Cassia. Guajaci. Mace. Perua-
nus.

LXIX. *Woods.* Guajacum.
Nephriticum. Rhodium ground
to a powder. yellow Sanders.

LXX. *Herbs.* Agrimony.
Avens. Betony. Centory. Car-
dus Ben. Featherfew. Hyperic-
on. Ladies Mantle. Prunella or
self heal. Pyrola or Winter-
green. Sanicle. Scabious. Scordi-
um. Tanfy.

LXXI. *Flowers.* Balauftians.
Camomil. Crocus. Cloves. El-
der. Hops. Roles.

LXXII. *Fruits.* Winter Cher-
ries. Bayberries in meal. Acorns
in Meal. Currans. Colocynthis.
Figs dry. Galls. Ivy berries.
Nutmegs. Prunes. Raisins of the
Sun. Tamarinds.

LXXIII. *Seeds.* Barly, Cori-
ander, Carthamus. Fenugreek,
Line. Mustard, Onions, Pease,
Rocker.

LXXIV. *Gums.* Aloes, Am-
moniacum, Absinthij suæ, Bal-
sam of Peru, Benjamin, Cam-
bogia, Carrana, Colophony,
Elemi, Flaterium, Frankincense,
Guajaci, Galbanum, Hypocistis,
Jallap, Liquorice suc. Labda-
num, Maudlin suc. Meconium,
Oyl Olive, Opoponax, Opium,
Rosin, Stone Pitch, Sugar, Saga-
penum, Sanguis draconis, Sar-
ecol, Scammony, Turpentine
common, Venice, Tar, Tacama-
nia, Tartar.

LXXV. *Juyces Liquid.* Ace-
tum, Chermes, Canary, Rhenish.
Sherry, Tent.

LXXVI. *Simple distilled Wa-
ters.* Centory, Cows Dung, Da-
mask Roses, Elder, Frogpaw,
F. mitory, Mint, Oranges, Plan-
tane, Tanfie.

LXXVII. *Animals and their
parts,* Bees in Powder, Castore-
um, Civit, Cantharides, Cochi-
nile, Deers Suet, Doves dung,
Earth-worms in Powder, Fea-
thers burnt, Frogs dried,
Goose greafe, Hogs Lard,
Harts horn rasped, Hares hair,
Hogs Gall, Hens greafe, Honey
clarified, Hogs lice, Ichthiocol-
la, Mummy, Musk, Mouse-dung,
Mans fat, Ox-blood dried, Ox-
Gall, Ox-horns, Sheeps Suet,
Swallows calcined, Toads dri-
ed, Vipers dried, Wax.

LXXVIII. *Minerals.* Am-
ber, Alum, Antimony, Armoni-
ack Salt, Bole fine, Borax, Be-
zar-Stone, Coral, Calaminaris,
Cinnabar, Ceruse, Litharge, La-
pis Nephriticus, Minium, Ni-
ter, Ostiocola, Petroleum, Pom-
pholia, Quick-silver, Sal Gem,
Steel, Sulphur vive, Terra Si-
gillata, Talk, Tin, Tutia, Vi-
triol white, Roman.

LXXIX. *Preparations of Sa-
turn,* Saccharum Saturni, Pul-
vis Saturni, lac Saturni.

LXXX. *Preparations of Jupi-
ter,* Sal Jovis, Spiritus & Ole-
um Jovis, Crystall Jovis.

LXXXI. *Preparations of Mars.*
Crocus Martis Aperitivus, Astring-
gens, Vitriolum Martis.

LXXXII. *Preparations of Sal.*
Aurum diaporeticum, Thieu-
sa Aur. Aurum Vire.

D & LXXXIII. Pre-

LXXXIII. *Preparations of Venus.* Tincture of Venus, Balsamum Cupri, Sal Veneris, Ens Veneris.

LXXXIV. *Preparations of Mercury.* Mercurius Vitæ Catharticus, Bezoardicum Minerale, Bezoardicum Solare præcipitatus albus, rubrus, dulcis, Aureum, Viride, Arcanum Corallinum, Turpethum Minerale, Gryphus Mercurij. Corrosive Sublimate, Mercurius dulcis subl. Hercules Bovij, Laudanum Minerale.

LXXXV. *Preparations of Luna.* Crystals of Luna, Tincture of Luna, Pilulæ Lunares, Magisterium Argenti, Lapis Infernalis Argenteus.

LXXXVI. *Preparations of Antimony.* Aqua benedicta Rulandij, Spiritus Vitæ aureus Rulandij, Syrupus Emeticus Salæ, Tincturæ Antimonij, Flowers of Antimony, Tincture of the Flowers, Tincture of the Crocus, Sulphur of Antimony, Liliū Paracelsi, Vitrum Antimonij, Vitrum Catharticum, Antimony Diaphoretick, Crocus Metallorum, Pilulæ albæ, Regulus, Ceruse, Sugared Oyl, Butter, Salt of Antimony.

LXXXVII. *Preparations from Salts.* Oyl of Salt. Spirit of Salt of Clöffæus, Spiritus Aluminis Astringens, Flores salis Armoniaci, Spirit of Sal Armoniac, Sal prunellæ, Spirit of Niter, Catharticum Nitri, Spirit and Oyl of Vitriol, Salt of Vitriol, Aqua Stryptica, Lapis Infernalis, Spiritus Vitrioli Vulnerrarius.

LXXXVIII. *Sulphurs.* flores Sulphuris, Jac Sulphuris, Bal-

samum Sulphuris, Spiritus Sulphuris, Oleum Sulphuris, Spirit of Amber, Oyl of Amber, Volatile Salt of Amber, Petroleum, Sperma Ceti.

LXXXIX. *Stones.* Pulvis CrySTALLI, Sal Lapidis Judaici, Pulvis de Lapide Lazuli, Prepared Pearls, Pulvis Ostiocolla, Prepared Coral, Salt, Tincture, Of Coral, Arcanum Perlarum, Poudrer or Ashes of Talk, Oyl of Terra Sigillata.

XC. *Hot or Fermented Waters.* Absinthij, Angelicæ, Epidemica, Theriacalis, Mirabilis, Cælestis, Prophylacticæ Sylvij, Regina Hungaricæ.

XCI. *Spirits.* of Wine, of Urine, purging of Scammony, Diapente, Pleuriticus, Guajaci, Anodynus, Analepticus, de Cornu Cervi.

XCII. *Oyls Distilled.* Anise, Amber, Bricks, Bay berries, Cinnamon, Carraways, Cummin, Cloves, Crani Humanæ, Camomil. Dill seed, Fœniculi, Juniper berries, Lavender, Mint, Marjoram, Mace, Myrrh, Nutmegs, Orange Peels, Rosemary, Rue, Ranarum Sennerti, Rhodium, Sage, Savin, Sagapenum, Soot, Spike, Sassafras, Turpentine, Tacamahacca, Wax.

XCIII. *Oyls by Expression.* Almonds sweet, bitter, Bays, Eggs, Mace, Olives.

XCIV. *Balsams.* Nervinum Schroderi, Cordiale Sennerti, Citrionum Compositum, Podagricum Hostij, Nutmegs.

XCV. *Quintessences.* of Antimony, Bawm, Celandine, Myrrh, Turpentine.

XCVI. *Elixirs.* Proprietatis Pa-

Paracelsi, Purgans Panchymagogen, Juniperinum, Lapidis Lazuli, Proprietatis Maxij.

XCVII. *Tinctures*. of Antimony, Aureæ, Castorei, Cathartica Clossæi, Corallorum, Catholica Grulingij. Cathartica Magistralis, Hydragoga Grulingij, Juniperi Mynsichti. Papaveris erratici, Piperis, Mumizæ, Vitæ Mynsichti, Viridis Senæ.

XCVIII. *Extracts*. of Aloes, Benedictum, Gentian, Hellebor, Laudanum Paracelsi, Londinense, Nostrum, Catholicum Sennerti.

XCIX. *Magisteries*. Aluminis, Craniij Humani, Rosin of Jallap, Rosin of Scamony, Tartar Vitriolat. Magistery of Salt.

C. *Salts*. Ash, Armoniacum sublimatum, Bezoarticum Vitriolatum, Carduus Centory, Craniij Humani, Rosemary, Soot, Tartar, Tartari Emeticum Mynsichti, Vipers, Urine.

CI. *Liquors*. Anodynus, Alexipharmacus seu Scorbuticus, Vitæ Anodynus, Ophthalmicus, Mercurij Vivi Mynsichti, Mercurij Sublimatæ, Salutis, Tartari.

CII. *Stones Artificial*. Lapis Infernalis, Causticus Argenteus, Salutis Hartmanni.

CIII. *Wines*. Absinthites, Rubellum, Benedictum, Antimoniale, Antiscorbuticum Mynsichti, Sanctum, Hydragogum.

CIV. *Vinegars*. Spirit of Vinegar, Vinegar of Squills, Treacle Vinegar, Regis Polonizæ.

CV. *Syrups*, Acetosus simplex, Glycyrrhizæ, Minthæ, de Symphito, Violarum, de Succo Rosarum, de Spina Cervina,

Oxymeî simple, Alarbazi, Hæmoptroicus, Succorum.

CVI. *Quiddones*. Barberies, Quinces, Mulberries.

CVII. *Powders*. Diambræ, Dianthos, Thuraloës, Hermodacts Compound, ad Casum ad Pestem, Dysentericus Crollij, Catharticus nost. Diasenæ, Causticus Barbetti, Sypticus Myndereri, Hæssij, Adstringens, Viperinus, Admirabilis.

CVIII. *Electuaries*. Confectio Alkermes, Diascordium, Mirbride, Venice Treacle, Philonum Magistrale, our New London Treacle, Caryocoffinum, Diacassia, Catholicon, Confectio Hamiech, Hiera Picra simple, cum Agarico, Diatallapa nost. Diagamba nost. Diaturbith nost. Confectio, Anodyna.

CIX. *Pills*. Cochiaminores, ex duobus, Cambogizæ, Rudij, Holagogæ, Catholicæ Porerij, Hydropicæ Bontij, Anodynæ nost.

CX. *Troches*. Albi Rhafis, Alhandal, Bechici digride Camphora, de Terra Lemnia, de Gutta Gamba.

CXI. *Lotions*. Aqua Ophthalmica, Visum Conservum, Ophthalmica Bruni, nostra, Viridis, Lixivium benedictum Mynsichti, Tartari.

CXII. *Oyls External*. 1. Simple. of Roses, Dill, Castor, Camomil, Hypericon, Littles, Nardinum, Scorpionum, Viperinum. 2. Compound. Benedictum, Catalorum, Exceftrense, Hyperici, Nardinum, Vulpinum. Anodynum nost.

CXIII. *Balsams External*. Lucatelli, Polychrestum, Vuhnerarium,

rium, Vulnerarium Hartmanni, Arcæi, Maxij, Amarum, Saponis, Terebinthinæ, Mindere-ri.

CXIV. Ointments. Album Camphoratum, Ægyptiacum, Basilicon majus, minus, Dialthææ, Diapompholigus, Laurinum, Vulgare, de Minio, & Nicotiana. Nutritum, Resinum, Rubrum defecativum, Tutia, Apostolorum, Comitissa, Marriatum, Neapolitanum, Populneum Aloeticum Mindere-ri, Fuscum, Regis Angliæ, de Rosæ Compositum, Vulnerarium simplex, Compositum, Niboticum Sympatheticum.

CXV. Cerdloths. de Galbano, de Ammoniaci Forresti, pro Herniosis.

CXVI. Emplasters. Catagmaticum, Diacalciteos, Diachylon simplex, cum Gummi, & Mucilaginis, Bpispasticum, de Gummi Elemi, Griseum, Meliloti simplex, de Minio simplex, Nervinum, Oxycroceum, de Ranis cum, & Sticticum Paracelsi, de Galbano Crocarum, Mynsichti, Dia Sulphuris, ad Hernianost.

CXVII. Injections, Suppositories. ad fluxus Uteri, Uterinus, Suppositoria dysenterica Anodyna Mynsichti, Styptica Mynsichti, Succa Mynsichti.

CXVIII. Meals. of Pease, Beans, Barly, Orobis, Lentills, Oats, Wheat, Bayberries, Rice.

CXIX. Hitherto of the matter of the Repository; out of which the Ingenious Student may chuse what likes him best towards the furnishing of his Chest: It is not necessary he

should have all things that are enumerated here; and if he has any thing more excellent of his own, he has the liberty of substitution: We have but delivered these things as Exemplars, from whence he may form new *ad libitum*; However what we have here insisted upon, are the very Choise, and best of those things now in use.

CXX. The next things to be considered, are the Instruments of Chyrurgery, whose Names we did but only mention in some of the former Sections: In what follows, we shall a little explicate their various and manifold Ends and Uses.

Instruments are as necessary as Medicines in some Cases; and without their help the most industrious Chyrurgian shall perform no very great or Excellent things.

V. Of the Instruments of Chyrurgery.

CXXI. The Incision Knife is used to cut the skin or flesh, where needs; to pare away the putrid part of a gangrenous member; in making Issues; opening Apostems; in Scarifications and Cupping. *Tab. 6. let. F.*

CXXII. The Sissors are to cut cloth for Rowlers, Lint and Emplasters: to clip off proud flesh, or putrid loose skin, end of Sinews, &c. See *Tab. 5. let. R.*

CXXIII. The Spatula is used to spread Emplasters, mingle Unguents on the palm of your Hand, or otherwise, cover the Pledgers,

Pledgers, and to stir and mingle Oynments and Emplasters in the Composition. *Tab. 5. let. E.*

CXXIV. *The small Probes* are with one end to sound the depth of a Wound or Ulcer: with the other end (by arming the Eye thereof with Lint) to wipe or dry a Sore or Ulcer: Or by dipping it in some Oyl or Liquor, to convey it to the bottom of the Ulcer or Fistula, thereby to mundifie, corrode, or heal it, according as need requires. *Tab. 5. let. N. O.*

CXXV. *The Uvula Spoon* serveth to put powder or the like to the palate of the mouth, (if it be sore, raw, or inflamed) blowing the powder into the Cavity behind it, through the hollow Pipe: as also to melt Unguents, to dip Tents in: and to pour scalding Oyl or Liquor into a Wound. *Tab.*

CXXVI. *The Levatory* is an Instrument to raise up a depressed Scull, (but be not too rash or hasty in using of it, for if no evil symptoms appear, the depressed Scull may rise, and scale off it self:) it serves also to take off the scale of a Bone after Amputation. *Tab. 5. let. LL. Tab. 6. let. M. N.*

CXXVII. *The Director* is to guide and direct the Incision knife in dilating or enlarging of a Wound, when you are near any Vessels, it is also used in Cutting for the Stone.

CXXVIII. *The Forceps* are used to take off Emplasters, Pledgers, and Tents, the Spil of a Bone, to hold up the Flesh

or Skin, the better to cut if with the Scissors or Incision Knife; to take out any thing which lies in the Ears, Nostrils, Mouth or Throat, or a bullet lying within reach. *Tab. 6. let. G. H. I.*

CXXIX. *The Speculum Linguae*; the one end thereof is to hold the Tongue down, when you inject any Liquor into the Throat or Mouth, or apply any Medicine thereto; or when you would make any Inspection into the Mouth or Throat, as in Quinsies, Cankers, &c. The other end thereof is to scrape the Tongue, if it is furred in Fevers, &c. *Tab. 5. E.*

CXXX. *The Fleame* is used to open the Gums, and to separate them from the Tooth which you mean to pull out, compassing the Tooth with the round sharp end thereof, close to the Tooth; and peircing deeper by little and little, untill you feel it as low as the Jaw bone.

CXXXI. *The Rasour* is used in shaving the Crown of the Head; and cutting Hair off of other places, where you intend to lay a Plaster, that so it might not hurt in pulling off. *Tab. 5. let. F. G.*

CXXXII. *The Stitching Quill* is that which holds the Needles; the Needles must be ready armed with green or red Silk oyled, to sew up the Lips of Wounds, to fasten Rowlers, and other things which need sewing. *Tab. 5. C.*

CXXXIII. *The Case of Lacets* must always be in a Readiness, clean, well set, not too

square pointed, nor too thin, for then they will not make a good Orifice; their use is to let blood with all.

CXXXIV. *The Salvatory* is to keep Oyntments in; and ought always to be furnished with these following, 1. Basilicon. 2. Apostolorum. 3. Aureum. 4. Album. 5. Dialthæa. 6. Linimentum Arcæi. If you design eight places in your Salvatory; you may supply the two last with *de minio* and *Diapompholigos*.

CXXXV. *The Plaster Box* consists of two principal parts. The first and largest place is to hold the aforementioned 12 Instruments; which is the upper part of the Box: The lower and lesser part is to hold Emplasters ready spread, with Lint and such like. The Emplasters most usual here are Diacalciteos, Strictum Paracelsi, de Gummi Elemi, de Lapide Calaminari, Oxyroceum, de meliloto simplex, de Mastiche, Catagmaticum.

Hitherto of the small and Pocket Instruments, The Larger for the Closet and Chest follow.

CXXXVI. *The Dismembring Knife*, has an use according to the Title, viz. in Amputation, or to take of any Member or part of mans Body, so far as respects the fleshy or soft parts even to the Bone. One may serve for the Chest, provided it be sharp, well ground, of good Metal, and not too thin edged. *Tab. 8. Let. F.*

CXXXVII. *The Trepan* is of use for Fractures of the Skull

where there is Contusion, and a depression of both the Tables.

§ 1. be sure the Instrument be good and without faults, and clean from Rust. § 2. The place where the blow was given is not always to be chosen to set the Trepan upon, sometimes the fracture is found at a good distance off, and therefore you must consider the complaint of the Patient, with respect to the feeling of your fingers.

§ 3. When the place is found, the Hair is to be shaved off about the breadth of 4 fingers round. § 4. This done have in a readiness all fit Medicines and Instruments to apply to, and bind up the Wound again, as Sponges, Ligatures, Hot-water, &c. and if a flux of Blood hinder not, foment with Posca or Wine and Honey. § 5. It will do also well to have a restrictive ready made with Bole,

Water, Vinegar and an Egg; or the *Pulvis astringens*, as also *Oleum & Mel Rosarum*, *Linimentum Arcæi*.

§ 6. The Germans seldom or never use this Instrument: nor is it to be used too hastily; for we daily see many dangerous fractures healed without it; there is not one in in ten that justly requires it. § 7. Therefore by reason of the danger, the young Artist may first make Experience upon a Calves or Sheeps head, till he can well and easily take out a piece of the bone. See the further use,

Cap. 16. Sect. 32. foregoing: the Instrument. See Tab. I. let. A. B. C. D. E. F. G. H. I. M.

E. F. the Male Trepan. G. H. I. the Female. M. the point of the Male. A. B. the head of the Trepan.

CXXXVIII. *The Trefine* is an Instrument only of Iron; the use thereof is necessary in pricking of the Skull, that does not penetrate both the Tables, that with them the print made upon the Skull may be taken away. See *Tab. 1. let. K. L. Tab. 7. let. K.* which is the Instrument it self. One of the Shanks may be Triangular, and then it may be used for the small Trepan.

CXXXIX. *The Levatory large.* It is an Instrument used in the depression of the Skull: this raises with more force than that little one before described for the plaster Box: because it hath firmness, not only in the Hand of him that raiseth it, but also in its Head. See *Tab. 5, L. L.* Some make the Levatory with three parts, having three spears or points to thrust forwards.

CXL. *The Head Saw.* It is an Instrument with which a vent may sometimes be given through the *Cranium*, whereby the use of the Trepan is sometimes happily forborn. Sometimes a small ragged piece of the Skull may so hang, that this Instrument may be used to saw it away. But the young Artist ought not to be too busie in sawing, plucking away, or raising the fractured Bone, more than meer Necessity urges to, lest dreadful Accidents (not to be remedied) follow: If the Bone be nearly loose, or in sight, take

it away, if not, forbear to pluck much at first; for Nature is exceeding helpful in ejecting unnatural things in that part, See *Tab. 5. H. I. Tab. 7. A. B.*

CXLI. *The small Head Saw.* It is that with which some men cut away the distances between the holes made in the Skull with the Trepan, as also rifts like hairs that do not penetrate, and scrape away the rottenness of the *Cranium*, *Tab. 3. L.*

CXLII. *The Dismembring Saw.* It is a great and terrible Instrument, ordained only for Amputation, or dismembering: It ought always to be ready and clean kept with two Blades thereunto, though one good Blade well used, may serve the Artist his whole life, *Tab. 8. E. E.*

CXLIII. *The Lenticular.* It is an Instrument which Levigates the Brims of the Hole made, lest pricking the Membranes, they might cause pain and Inflammation. See *Tab. 7. I.*

CXLIV. *The Raiser Knife, or Pen Knife.* It is used as an Incision Knife, and when there is no fear of the parts underneath, namely in dividing the Scalp of the Head as far as the Skull, and in opening Nodes of the French Pox, especially upon the Shin Bones and elsewhere, and in dividing the Caruncles of the Matrix, See *Tab. 2. O.*

CXLV. *The Membrane Preserver.* It is Silver Plate (for it must never be made of Iron, because of the Inbred cold thereof, which is hurtful both to the *Dura* and *Pia mater*, which cover the Brain) made firm, somewhat crook-

crooked and smooth on the outside, used in great depressions of the Skull 3 or 4 times with the Trepan, and to cut forth the Spates between the holes: for then the Plate is let down between the Skull and *dura mater*, that the outward part of it may be nearest the Brain, lest by the sharpness of Pincers and Saws, the Membranes of the Brain should either be pricked or cut unawares. *Celsus* calls it *Μένιγγοφυλάξ*, *Meningophylax*, See *Tab. 5. K.*

CXLVI. *The Dismembring Pincers.* They are intended for the immediate separation of Fingers and Toes; See *Tab. 3. let. G.* They are now much out of use, because they often introduce ill Accidents, a fine little Saw being introduced in their place.

CXLVII. *Dismembring Chizell.* Their use is the same with the former, and much more commendable: but a fine Saw as aforesaid, is used in place of them both, being much more safe. See *Tab. 3. I. Tab. 8. D. G. H.*

CXLVIII. *The Mallet or Hammer.* It is commonly made of Wood, some have them made of Lead, and some of Iron: It is generally used with the Chizel. See *Tab. 3. K.* you may also have it made of the Common fashion.

CXLIX. *Speculum Oris.* It is an Instrument which takes hold of the Tongue, and under the Chin at once, being a very necessary Instrument to hold open the mouth for the better applying Medicines to the Throat, as

also to the Uvula and other parts. *Tab. 8. OPQ.*

CL. *Speculum Ani.* It is an Instrument by which the Diseases of the *Intestinum Rectum*, and Neck of the Womb are seen by opening of those parts. If there happen in the Orifice of the Fundament. or Neck of the Matrix any excoriation or ulceration, Medicaments cannot well be brought to the Grieved part, but by the help of this Instrument; nor can the griet be seen without it, See *Scultetus Tab. 17. fig. 2. and 3.* Yet let not the young Artist be too busy in using of it, without Necessity, or where an Injection may do the feat. For if the *Sphincter Muscle* should not easily give way, but make resistance, (as in many Patients it will against their Wills) it may easily be bruised or hurt, and so thereby you may create a new Disease. It has a Male part for Men and Female for Women. *Tab. 8. M. N.*

CLI. *Speculum Matricis.* It is an Instrument only used for Women, when the dead Child is to be cut out, or some Ulcer of the Matrix is to be viewed, for which purpose it is of excellent Service, *Tab. 7. C.*

CLII. *Actual Cauteries.* The Use of these are very needful in Amputation, for the Cauterizing of any Vein or Artery, in strong fluxes of Blood, which cannot otherwise be staid. In the Epilepsy, or Falling-sickness, they are often used with good success; as also to make a Fontinel or Issue in the Neck or hinder part of the Head, and in

the

the Cure of the Lethargy and Apoplexy. Anciently they were used for the opening of Apostems, but now that practise is quite laid aside. When a Member is amputated sometimes the whole end of the Stump is Cauterized, and sometimes but the great Vessels only. *Tab. 6. A. B. C. Tab. 8. A. B. C.*

CLIII. Actual Seton Cautery. It is also called the Needle for the Seton, which must neither be too long, least the point should miss the opposite hole, (but about a hand breadth in length :) neither must it be very small or gross, but answerable to the Holes of *Seton Pincers*, only a little smaller, and so being made very red hot, it passeth through most nimbly, making the *Seton* without almost any pain. See *Tab. 3. E.*

CLIV. Cautery for the Ranula. The *Ranula* is a Tumor under the Tongue which corrupts the Speech: this if it be any otherwise abated, except by the burning Iron, it will grow again: It is thus used, first frame a plate of Iron (hollowed on the inside) having a hole in the midst, which (the mouth being wide open) apply to the Tumor, so that the hole therein may fall just upon that part of the Tumor which you would open: then with this Instrument red hot pierce the Tumor, with your Thumb under the root of the Chin, a little bear up by strength and force, that it may pierce the deeper, *Tab. 5. S. T.*

CLV. The Catheter. It is a

kind of Probe, by which being thrust into the passage of the Yard, and into the Bladder, way is made for the Urine, or the Stone is felt and removed: When therefore you have occasion to use it, put it in gently, so far as it can well go, being first anointed with Oyl of Almonds or of Roses: thrust it in without much force; then feel by the root of the Yard near the Fundament, where the Catheter resteth or bears out, and so by guiding, thrust it in farther towards the Fundament, pressing or bearing down (as it were) a little, the lower part of the Instrument, with the upper hand, which stays the Catheter, then (with the help of the lower finger of the other hand) turn the Catheter upwards, putting it also withal forward a little, so will it slip into the Bladder. Then draw out the Inner Wier, and the Urine will come forth; keeping still the Instrument carefully within the Bladder till all be run out, which will come without forcing; Moreover, you may by putting up your finger in *Anum*, the Catheter being in the Bladder, and the Water drawn out easily feel the Stone in the Bladder, if any be, the Sick standing and bending his Body also forwards. It is made of Silver that it may be bent; and very smooth that it might not hurt; with many little holes perforated at the end, that the Pin being drawn back, the Urine may freely come forth, *Tab. 4. A.*

CLVI. The Director. It is a Sil-

Silver Probe, which must be so bent, that its fissure, which it hath in the middle, as far as the end of it, may be on the back-side; or Gibbous part thereof. It is called a *Director*, because being thrust into the Yard, it doth most exactly shew the Neck of the Bladder; and upon that must Incision be made, to take out the Stone. See *Tab. 4. D.*

CLVII. *The Dilatatory.* It is an Instrument used for enlarging of a Wound, when Arrow heads, Bullets or other Foreign matters are to be taken forth, out of the Fleshy or Brawny parts. *Tab. 7. H.*

CLVIII. *The Wound Hook.* It is of use in all such Wounds where there may be some peices of a Link of a Chain, or Mayle, or other like matter lodged therein, to pull them out. It is called the Hooked Probe, and is useful in Wounds made with Gunshot. *Tab. 6. O.*

CLVIX. *Trebellum Hildani.* The Wimplet of *Hildanus* for bringing forth Bullets, and such like. It consists of three parts, to wit, a Piercer, in a double case: we have mentioned it, and shewed the Use thereof, *lib. 3. cap. 25. sect. 46. § 3.* See the Figure it self. *Tab. 2. A. B. C. D. and E. F. G. H.*

CLX. *The Scalpra.* Scraping Tools, to scrape or shave Bones withal where there is occasion; you ought to have divers of them, and of several Fashions: Those for the Head are commonly of one Fashion, those for other Bones of another. When

a rotten Bone is to be scraped in the extreame parts, as the Thigh Bone, Shin Bone, Shoulder Bone, Arm Bone, greater and stronger rasping Tools must be provided for them. Now every rasping Instrument is made of most pure Steel, that it may have an Edge, that will perfectly rasp away. The Ancient did fit proper hafts to every scraping Instrument; but our modern Artists provide one handle of Wood, Bone, or Ivory, which they fasten to the Instrument by a Screw. See *Tab. 2. N. Tab. 7. N.*

CLXI. *The File.* It is an Instrument of Common use in cleansing, smoothing, and making even the Teeth. See *Tab. 4. H.*

CLXII. *The Pliers.* It is an Instrument to take out an Arrow head, or the head of any Weapon which is hollow, for the shanks being divided in that hollowness, will hold the Arrow head firm and fast, and so draw it out. *Tab. 7. G.*

CLXIII. *Pliers with a Screw.* It is an Instrument having a screw running through its Handles, or cross its shanks. The end of which is like the Crows Bill, or a little flatter. This Srew doth open and close the Crows Bill, as you please to take hold of the Head of the Weapon, though it be buried in the flesh. See *Tab. 7. D.*

CLXIV. *Hooks to draw out the dead Child.* They are made of various fashions, according to the use, and place of Application: but are never to be made use of unless the Child be dead;

not

nor then, if nature be able to expel it, as many times she is. See *Tab. 2. I. K. L. M.*

CLXV. *Hook to draw Stones out of the Bladder.* It is to be used, when the Stones are many, or little, or in peices, or cannot be easily brought to the Neck of the Bladder. See *Tab. 4. E.*

CLXVI. *Instrument to press down the Dura Mater.* It is used after Trapaning the Scul, as often as you dress the Wound; wherein, pressing it down to the *Dura Mater*, you must bid the Patient to strive to put forth his breath stopping his Mouth and Nose, so that the matter may more easily be evacuated. This Tool must have the end round, polisht, and smooth: see the *Fig. Tab. 7. M.*

CLXVII. *The Gouge or Hollow Chizel.* It is of use to make an enterance into the Bone, for the fixing of other Instruments, as the Trepan, &c. The use hereof is common with Carpenters and Joyners. See the Figure, *Tab. 3. H.*

CLXVIII. *Seton Forceps.* They are of several Forms, the two principal of which we have exhibited. *Tab. 3. A.* and *Tab. 4. P.* The first is a pair of Pincers, having holes in their upper part, with a certain Cavity, which is closed by the Chyrurgeans hand; with these hold is laid on the skin of the Neck, and with the Needle *Tab. 3. E.* being red hot, the skin is perforated through the holes at *B.* The latter are of the same use as the former, save they have a hold-fast at *A.* which of its self binds

or holds close the Instrument or Pincers. These are only of use when the Chyrurgian has no servant, which may deliver to him the red hot Needle.

CLXIX. *Seton Needles.* These are to be used, either red hot, or cold: that which is used red hot, is that before mentioned, *Tab. 3. E.* That which is used cold is sharp and with edges, being only first anointed with Oyl of Roses. See it *Tab. 3. F.*

CLXX. *Needles for a hair Lip.* They ought to be made of Steel, sharp, three square, and of about two inches and a half long. The thread must be well waxed, that it break not; the Needle must be run through both sides of the Wound or Breach, taking up all the flesh of both Lips, and in the same manner, another short Needle, (as the place will bear) must be thrust in the midst, cross the former, and under the Flesh as the former is. Then the Thread which was in the Eye of the first Needle, must be strained cross about all the four ends of the two Needles, 7 or 8 times or more, to hold the Lips of the breach firmly together, till the union be perfected, after which the Needles must be taken away and the wounds they made healed according to Art. See *Tab. 8. I K L.* and *Cap. 18. Sect. 2.* foregoing.

CLXXI. *Needles for Wounds.* These are chiefly for Wounds of the *Peritonæum* but they are made use of in other Wounds also. The manner of the using of these Needles, we have at large

large declared in *Chap. 14. Sect. 17.* foregoing, and in other places. *Tab. 6. D. E.*

CLXXII. Needles for Couching Cataracts. They are often made of Silver, but in my Opinion those made of Steel are much better. See *Tab. 4. LMNO.* they are commonly inserted into a handle of Silver, which is an *Ostium*, that on both sides has a perforated *glans* or Ivory head, through which the Needle passes. *L.* is a Silver Case. *M.* is the Needle with a fast and Case of Silver, fitted for the curing of a Cataract or Suffusion. *O.* the Needle in its half, and its *Capsula* or Cover. The way of Using see *Cap. 17. Sect. 11.*

CLXXIII. Hollow Scraping Levatoric. It is a singular use after trepanning to take away the Splinters, and smooth the inward edge of the Skull, lest the little bits or splints should hurt or prick any of the Membranes: It is smooth on the out side, and hollow within, that it may receive and hold whatever it shaves off, from falling in upon the said Membrane. See *Tab. 6. K.*

CLXXIV. Forceps to break off Bones of the Skull. These may supply in part the use of the former, for want thereof, as also to take out bits, splints, and such like, which are already fallen down upon the Membranes: See *Tab. 1. N.* The Crows Bill, without Teeth. And *P Q* the Hollow Forceps, or Parrots Bill.

CLXXV. The Crows Bill Forceps with Teeth. They may be for the former use in Fractures

of the Skull: but their chief Intention is in Amputation, to draw the Vessels out of the flesh, that thereby they may be tyed up to stay their bleeding, which is done with a double and strong thread: after which you shall with a sharp Needle and Tread, take four stitches deep into the flesh, which make a-cross, like the Letter X; sow up the flesh and skin, somewhat loosely to cover the end of the Bone, that it take not the Air; for if you should endeavour to draw it close to make the skin meet, the skin would break and your work would be spoiled. See *Tab. 1. O* and *Tab. 5. M.*

CLVI. Cranes Bill Forceps straight. They are the straight Instrument of *Hieronimus Fabricius ab Aquapendente*, for to draw forth a *Polypus*, being made of Steel, Convex outwardly, but inwardly concave, having an edge inwardly bent backwards, wherewith we can cut nothing but the *Polypus* now laid hold on. They are of use also to take forth small Bullets, and other strange Bodies, gotten into Wounds. See *Tab. 6. I L.* and *Tab. 2. P.*

CLXXVII. Goose-Bill Forceps. Their general use is in Wounds, to take forth Bullets which are large, and other things of an Orbicular or round form. Their Magnitude and Forms may be various, according to the diversity of the occasion, and situation of the Wound, as little, great, straight, crooked, broad, narrow, Tooth-

ed or smoooth. See. *Tab. 4. F G*
Tab. 6. G.

CLXXVIII. *Crooked Forceps or Pliers.* They are an Instrument wherewith the *Polypus* is cut and drawn forth, which by the holes of the Nostrills, leads in the Pallet to the Throat, thereby threatening to choak the sick: They are also of use in taking Bones or Splints out of Wounds, whose Cavities make an Oblique Angle. *Tab. 6. H.*

CLXXIX. *Crooked Toothed Cranes Bill.* It is an Instrument, altogether like the straight Cranes Bill at *Sett. 175.* Save the Bill of the Instrument, makes with the shanks an oblique Angle: The uses of it also are the same though used in different kinds of Wounds: the straight Cranes Bill, is only used in straight Wounds; the crooked Cranes Bill in such as are Oblique, being directed to rake forth Bullets, or other strange Bodies from Wounds, having an Oblique Angle.

CLXXX. *Myrtle Leaved Pen-knife.* It is a Knife with two edges, and resembling the form of a Myrtle Leave, used with its proper Pincers, to cut a Seton in the Neck. *Tab. 4. I. K.*

CLXXXI. *Seton Point.* It is a long narrow point, to the end of which is fastned a Seton, or round line of Purple Silk, which being drawn to the middle is left in the hole: to the point at *D* is fastned a small button of Wax, that it may pass through without delay or pain. See *Tab. 3. C D.*

CLXXXII. *Terebellum for the*

Head, or Head Pincer. It is used in the same manner as is the Trepan or Trefine; but chiefly in those cases where a single hole may be of service enough to discharge the purulent matter from the Meninges of the Brain. *Tab. 1. K L.*

CLXXXIII. *Lapidillum.* It is a Spoon made of Latten, where-with the Stone is taken forth out of the Urinary passages; namely a Probe, which on that part, where it is made hollow like a spoon for the Ears, is put into the Conduit of the Yard, so that it may pass beyond the small Stone above it, and may lay hold on it with its Lips and Cavity. This done, Oyl of sweet Almonds is poured through the hollow passage (which hath a large Orifice) into the Urinary passage, that it may become slippery: afterwards the Probe is gently drawn forth, and the Conduit is pressed behind the Stone with the finger, till it be driven forth. *Tab. 3. M.*

CLXXXIV. *The Goose Bill Spatula.* It is an Instrument provided to receive and take forth Bullets, or other round Bodies, out of Wounds, for such like intentions. See it *Tab. 4. B.*

CLXXXV. *Syring with a long slender pipe.* It is used to inject Lotions, into hollow Wounds, Ulcers and Fistula's, and to wash other obscure parts, which can no otherwise become at.

CLXXXVI. *The Ear Syring.* It is altogether like the former save

save the pipe at the end is all of one peice with the body of the Syring, short *viz.* about an inch long, and so thick as to fill the Cavity of the Ear. The chief uses of it, are to inject liquid Bodies into the Ears, Nose and Yard, by this Instrument if well made, you may inject into the Bladder it self.

CLXXXVII. *The Womb Syring.* It is a straight hollow Cane, made of Pewter, of about 7 or 8 inches long; smooth, equal, and about the thickness of a mans Thumb; having its end perforated with five or six small holes. It serves to cast in injections to wash the Womb, cleanse it, and to deterge Ulcers, Fistula's, and such like, stop the Whites, &c.

CLXXXVIII. *The Clyster Syring.* It is a Syring with a long pipe, like that at Sect. 185. save the pipe is thicker much, and has a larger Orifice: and the body of the Syring is so large, as to hold neer a pint: It is a most admirable Instrument to exhibit a Clyster with, casting it in much farther than can be done by any Clyster pipe. You may have them of several sizes.

CLXXXIX. *Clyster Pipe.* It is an Instrument made of Box, Bone or Ivory, about three inches and a half long, hollow, having its least end (which enters into the *Anus*) perforated in the sides thereof with 5 or 6 holes: the larger end is tyed fast to a Bladder, with a Cork and thread; which Bladder holds the Clyster till it is administred: Its use is to exhibit Clysters, in-

stead of the Clyster Syring, if it be wanting.

CXC. *Waights and Scales.* These are Instruments so necessary, that the Artift can in no ways be without them, the Life of the Patient often lying at stake, for a little fault or error, committed by a mistake in the dose of a Medicament. The Scales ought to be gold Scales, bright, smooth, equal, with a delicate Beam, which may turn the tenth part of a Grain. The weights are gr. $\frac{1}{2}$ j. ij. iij. iiij. v. vj. half scruple $\frac{1}{2}$ ss. Scruple $\frac{1}{2}$ ss. $\frac{1}{2}$ ss. half Dram $\frac{3}{4}$ ss. Dram $\frac{1}{2}$ ss. $\frac{3}{4}$ ss. half Ounce $\frac{3}{4}$ ss. Ounce $\frac{1}{2}$ ss. all which weights ought to be double, least any should be lost.

CXCI. *The Description or Form of the Chyrurgeans Chest.* The Old Form of the Chyrurgians Chest, is well enough known to most: but the Contrivance thereof, not so absolutely convenient and useful as might be wished for: for which cause sake, we shall say nothing here, as to the Description thereof; but propose a new Form, having greater conveniences, more security, less trouble, and vastly more useful. Let it be made absolutely in form of a Nest of Drawers; two foot and an half high: a foot and an half deep backwards: and four foot and a half long. Let the length be divided into nine equal parts: and the height into five, dividing the lowermost row, only into two Divisions, which may be for keeping the Instruments, Tow, Rowlers, and other necessities belonging to the Chyrurgick Practice. The four up-
per

per rows then being divided into 9 equal parts, will make the whole Nest of Boxes to consist of thirty six several drawers: let each drawer be divided backwards into three equal parts, so will the whole Nest contain 108. several Boxes, each Box being a just Cube, about half a foot every way, so have you a Repository large enough for any ordinary Practice whatever, which may contain 108. or 216. or 324. or 432. several Medicines more or less, such as you think most convenient: to this Repository thus constituted, let be affixed two substantial Doors, which may open in the middle, and be there firmly shut (as occasion requires) with strong Bolts and Locks, to keep the drawers in their places.

CXCII. Of the Vessels holding the Medicines. § 1. All Liquid things, as Waters, Spirits, Tinctures, Wines, Vinegars, Syrups, Oyls and Salts may be put in Glasses: Pouders, Electuaries, Extracts Pills, Troches, Balsams, Oyntments, in Leaden Pots, with Leaden covers; Cerats and Emplasters, in Papers and Bladders: Roots, Herbs, Flowers, Seeds, in Papers. § 2. Let the Glasses be made purposely, in a Mould, for this Design, two Inches and a half square, and almost six Inches high, and all of them covered with Pewter Screws,

upon the top of which let be Engraven the name of the Medicine, so will each square Box hold 4 glasses.

§ 3. Let the Leaden Pots be also cast or made two Inches and a half square, and neer half a foot high, with square covers, to slip on and off; so will each Cubical box, contain about 4 of these leaden boxes; upon the sides of these Leaden Boxes (not on the covers) let be engraven the name of the Medicaments contained. § 4. Lastly let the Rows of the Cerats and Emplasters be made of a just length, viz. near six inches long; thereby to fit the length of the Boxes; and upon the papers, in which they are rowled, let the name of each be inserted: doing the like also upon the Roots, Herbs, Flowers, Seeds, &c. So will the Chyrurgeans Chest and the matter thereof, be compleatly furnished. § 5. But there are several things which the Chyrurgian ought to have in large quantities, which because they cannot be well lodged in the Chest, ought to be carried in great Stone-Bottles, or Rundlets well hooped; and those things are these five. 1. Oyl Olive. 2. Vinegar. 3. Spirit of Wine. 4. Lime Water. 5. Syrup of Sugar. for sweetning things, making up Bales, Electuaries, Pills, Troches, &c.

CHAP. XXII.

Of Infants Diseases.

I. **M**Any are the Diseases which afflict Infants, all which in our short Compendium we may not treat of particularly; the principal are these, 1. *Convulsions*: 2. *Falling-sickness*: 3. *Gripings*: 4. *Ruptures*: 5. *Strutting of the Navel*: 6. *Watchings*: 7. *Hard Breeding of Teeth*: 8. *Fevers*: 9. *Measles*: 10. *Small Pox*: 11. *Coughs*: 12. *Shortness of Breath*: 13. *Costiveness*: 14. *Loosness*: 15. *Vomiting*: 16. *Worms*: 17. *Diabetes*: 18. *Gallings*: 19. *Stone in the Bladder*: 20. *Running of the Ears*: 21. *Leanness*: 22. *Rickets*: 23. *Consumptions*: 24. *Witchcraft*.

II. **CONVULSIONS.** § 1. They generally afflict the joynts in the Hands, Arms, Legs and Feet; and arise from sucking largely of gross and unwholsom milk. § 2. The Cure is 1. by keeping the Child warm: 2. Anointing it with Oyls of Amber, Rosemary, or Lavender, mixt with Hogs-lard, an Ounce of the former to 3iv. of the latter. 3. By purging it every other day with Manna for 7 or 8 times. § 3. Lastly, By exhibiting Essence of Rosemary, Ashes of the Dung of a Black Cow, or *Antepileptick Spirit of Vitriol*, in Ale, Wine, or a spoonful of choise Canary, for a month or two together.

III. **FALLING-SICKNESS.** § 1. It comes sometimes from frights, corrupted Milk, Worms, hard breeding of Teeth, Fevers, Measles, small Pox, or affects of the Brain. § 2. The Cure must be according to the Cause: if it comes of corrupted Milk, give a Vomit of the most gentle Gilla. § 3. If from Worms, expel them by the Infusion or decoction of Crud Mercury. § 4. If from the Teeth, you must facilitate their cutting, &c. § 5. But the Cure in general respects both the time of the fit, and time after the fit; anoint the Forehead and Neck with Oyl of white Amber, and give inwardly the *Spiritus Antepilepticus* (See the *Dispensatory*, lib. 4. cap. 2. Sect. 1.) a quarter of a spoonful of it in a little black Cherry Wine at a time. § 6. The Emerald stone is a specifick; so the Stone found in the Stomach of a Horsleech at the full Moon: Elks Hoofs, put into the left Ear: A vomit of the Gilla *Theophrasti* a Nodulus made of Harts-horn prepared, Salt of Corals, Crystal prepared, and Mistletoe of the Oak, put into the drink, and renewed every fifth day, giving every morning fasting *Spiritus Antepilepticus Scheseri* gut. x. in the Cherry Wine aforesaid, applying

ing over the naked Head, *Emplastrum Cephalicum Schroderi.*

IV. GRIPINGS. § 1. *They are generally known from the Childs unquietness, no other cause as Teeth, Gallings, &c. occurring.* § 2. *In this case, it will be good that the Nurse be careful of her self, for oftentimes the Child sucks its disease from her: in all she eats or drinks let her take Spices, Anise, Fennel or Carraway Seeds, or their Oyls in any convenient Vehicle.* § 3. *Then as for the Child, give it half a Dram of Aniseeds in powder, in any thing in which it will best swallow them, this you may do for three days together; or you may give gut. ij. or iij. of the Oyl with Sugar and Milk in the morning fasting; giving also at night going to bed, as the last thing, Li-
quor vitæ Anodynus, gut. x. xv. or more (as the Child is in Age) see it in Our Pharmacop. Londinensis, lib 4. cap. II. sect. II. which exhibit in a little Canary, continuing it for 6 or 8 days.*

V. RUPTURES, § 1. Here you must follow the general method, keep the Child as quiet as you can; and having put up the Gut with your Fingers, let a proper Truss be fitted to the part, and so fastned as that it may not Gall it. § 2. Give inwardly in its Milk Blood of Comfrey mixt with a little Balsam of *Sal Gem*, which continue for 40 days; or you may give a strong Gelly of Hogs Feet, aromatized with Cinnamon. § 3. if the Rupture be great, ap-

ply to the place *Emplastrum Catagmaticum, ad Herniam*, or Our Specifick of an Ox-Gall for that purpose. § 4. *These Ruptures in Children are either from the Peritoneum relaxt, or broken, which may be done by Crying, Coughing, a Fall, crossing the Legs, or Weakness; and then the Tumor is for the most part in one side, and the Guts fallen down may be perceived by the Touch.*

VI. STRUTTING OUT OF THE NAVEL. § 1. It arises when the Blood runs thither from pain, or from external hurts: you may apply dis- cussers, but avoid Suppuration as much as may be: § 2. It is dangerous if it change to an *Apostemation*, lest that being broke, the Guts should fall down. § 3. What we have before prescribed for a Rupture may be used here: the Chyrurgick Cure seek out in its proper place, in the beginning of this Book.

VII. WATCHINGS. § 1. *They come for the most part from sharp vapours, arising from Milk corrupted in the Stomach; or from Milk suckt from a Nurse which eats Garlick, Onions, Leeks and such like things; sometimes also from Feavers, or some other painful affect.* § 2. *The Disease is remedied by taking away the Cause and preventing Corruption:* § 3. *If the Child has pain, you must ease it with inward or outward Anodynes: if a Feaver, it must be repressed by Antisebricks:* § 4. *If from ill Milk, the Nurse must keep a better Diet.*

outwardly anoint the Feet with Marrow of Deers bones, and if you see farther occasion, you may exhibit (with discretion) *Hypnoticks*.

VIII. HARD CUTTING OF TEETH.

§ 1. *It is known* by the time of Toothing, which happens to be about the middle of the seventh Month; by the Infants putting their fingers in their mouths, and the places where the Teeth break forth, looks white, great pain afflicts them, with Watchings, Looseness, Convulsions, &c. § 2. *If the Child has a Looseness*, beware that it be not too soon stoppt. § 3. *Anoint the Gums* with the Brains of a Hare boyled, or with the fat of it: if they be Inflamed, anoint them with Oyl of Roses and white Wax, washt with Juycce of Nightshade. § 4. *If the pain be yet violent*, and ceases not, you must use Chyrurgery, cutting them as before we have taught. § 5. *If they be Ulcerated*, anoint them with fresh Butter, mixt with a little Honey and Pouder of Frankincense.

IX. FEAVERS. § 1. *Before you do any thing*, be sure to consider the Cause, for by taking that away, the Feaver will cease. § 2. *If they proceed from pain of cutting Teeth*, you must ease it: if from Gripes or Wind; you must take them away, and give Carminatives to expell: if from Corrupt Dyet, you must change it. § 3. *If the Feaver is violent*, beware of giving things too cooling, lest you cause Obstructions, Convulsions and Death.

§ 4. *Beware also of things too hot* lest you more inflame: *Pulvis ex chelis Cancrorum*, Pouder of Oriental Pearl, Salt of Tartar, Bezoar Mineral, Tincture of Corals, all of them or some of them exhibited in a fit Dose in Syrupus Granatorum or Conserve of Roses are excellent and safe. § 5. *If the Body has been long bound*, you may open it with an Emollient Clyster, and after purge for two or thtee days with choise Manna. § 6. *if any odd Symptom appears*, abate it with things proper thereto.

X. MEASLES. § 1. They are small red Pustles, breaking forth upon the skin, with a continual Feaver, and a peculiar Fermentation or boyling of the Blood. § 2. The Signs, Causes, Differences, and Cure are almost the same as in the Small-Pox. § 3. *In Order to the Cure*, the Tincture of Coralls is famous, for it secures the Patient against all danger; you may exhibit it with Aqua Bezoartica Langij, or Aqua Theriacalis mixt with a little Sack. § 4. *Outwardly anoint* with Oyl of bitter or sweet Almonds, keeping the Patient very warm. § 5. *Purging, Vomiting, Clysters or Bleeding* are dangerous, for by drawing the Venom inwardly, they may either presently kill, or lay the Foundation of a far worse Distemper.

XI. SMALL-POX. § 1. They are Pustles arising by means of the Expulsive faculty, on the surface of the skin, and parts which hold affinity therewith, joyned with a continual Feaver

by

by reason of a peculiar fermentation of the Blood. § 2. That they will suddenly come forth, is foreknown by pain of the Head, Neck and Back, heaviness of the Eyes, itching of the Nostrils, difficulty of Breathing, Trembling of the Feet, often sneezing, panting of the Heart, to which add a continual Fever from the fermentation of the Blood and Humors, which sometimes is vehement, accompanied with Spots, great Thirst, raving. § 3. The Cause is either Internal, from the impurity of the Maternal Blood, which is hidden for some years in the fleshy Substance of the whole Body, where at length, no longer able to bear it, it begins to ferment like new Wine or Beer; by which Fermentation a Fever is raised, the heat is communicated to the Heart, and the pure is separated from the impure, which by a Critical expulsion is sent forth in many little Pustles. § 4. Or else External, when out of Bodies so diseased, a Contagious Vapour is communicated to another; or the humors are put into agitation by a contagious and corrupted Air, so altered by the Influence of the Stars, &c. § 5. The Cure is first by mitigation of the Ebullition or Fermentation of the Blood, by Sudorifics which causes a transpiration of a great part of the matter, or expulsion of it to the exterior parts: you may afterwards exhibit a Clyster of the Decoction of Barley with fresh Butter and common Sugar; or you may give the Child a little

Syrup of Citrons. § 6. Secondly, By assisting Nature in the Expulsion, which is done by exhibiting gr. vj. viij. or x. of *Theriac Londinensis Salmoniana*, in Juyce of Wood Sorrel, or other convenient Vehicle; or for want thereof you may give *Quercetans Stomach Pouder*, but the former is the better. See Our *Pharmacopœia Lond.* lib. 4. cap. 21. sect. 58. and cap. 22. sect. 62, § 7. Thirdly, By Defending the Parts. The Eyes must be rubbed with pure Gold, or washt with the Infusion of Saffron and Camphir in Eye-bright water: if they are closed, foment them with the said Infusion or Milk luke warm: The Nostrils must be kept open with a Nodule made of Pouder of Camphir and Diarrhodon Abbatis dipt in Rose-water: if they be closed they must be fomented with hot Milk or hot Decoction of Barley. The Throat must be often washt and gargled with the Infusion of Saffron or Cochenele in Barley broth, sweetned with Honey of Roses, giving after it *Diamorum*. § 7. Fourthly, By ripening the Pox, which is done by anointing them with Oyl of sweet Almonds, Roses or Elder: when they are ripe, open them with a Golden or Silver pin, that no Warts or Holes may be left behind, then anoint them with Oyl of Savin or Mans fat, and wash often with *Hedychrum*, or All Flower water, which see in Our *Pharmacopœia Lond.* lib. 2, cap. 2. sect. 5. § 9. and cap. 7. sect. 16.

XII. COUGHS. § 1. Give *Spanish* juyce of Liquorice dissolved in Canary, or rather the Tincture thereof three or four times a day. § 2. If the Cough be extream, give the same all the day long, and at night going to Bed, *gut. xx. xxx. or xl.* of Our *Liquor Viæ Anodynus* in Sack, anointing the Breast and Stomach with Oyl of Mace, and keeping it warm with a Cats skin, or other things equivalent. § 3. *Diacodium solidum*, *Loboch ex Allijs*, *de Caulibus*, *de Farfara*, &c. are of excellent use in this Case.

XIII. SHORTNESS OF BREATH.

§ 1. All Bechicks are exceeding good in this Case, and what we have even now designed against Coughs may be exhibited here. § 2. If *the Asthma* be accompanied with a Cough, it either arises from matter falling from the head, and then there is a Catarrh and Cough, and in Breathing there is perceived a certain snoring and sound, the Air or Breath not passing freely; but through the Obstructed *bronchies* of the Lungs: Or, from Flegmatick Blood ascending out of the Veins to the Lungs, and then there is neither Catarrh nor Cough, but the *Hypochondries* are twell'd. § 3. In the Cure consider whether it arises from a hot or cold, moist or dry Intemperature; and accordingly fit your Pectoral: § 4. Wash the Feet in a Bath made of Cephalick Plants, then anoint the Soles of them with the fat of a Pike or Goats suet; and anoint the Breast with Hens

Grease, and apply over it a Plaister of warm *Mistridate*, so will the Breathing be more easy.

XIV. COSTIVENESS.

§ 1. It proceeds either from some Error in the Dyet of the Nurse; or a Distemper either cold and dry, or hot and dry in the Bowels. § 2. In this Case move the Bowels with Manna, Cassia, Laxative Raisins, &c. § 3. Sometimes it proceeds from a viscous or tough Flegm, which wraps up the Excrements; in this case, use inciders and cleansers: you may outwardly apply to the Navel things prepared from Aloes, Ox Gall, Myrrh, Butter, Oyl, *Diacolocynthidos*, and such like; exhibiting also Mouse dung mixed with Goats Suet, in the form of a Suppository or Clyster: Giving to the Nurse in the mean season, proper Purging Medicines.

XV. LOOSENESS.

§ 1. It ought not to be stop'd suddenly, if it be not very great, or the Infant bears it not ill. § 2. If otherwise, cleanse, first with a Clyster, or Syrup of Roses Solutive with adstriction, then after bind with astringents having respect to the Temperature of the Body. § 3. Among which *Diaacorallion*, and *diacidonium cum speciebus*, are said to prevail: but *Diaacordium* which is an excellent thing is the common Remedy.

XVI. VOMITING.

§ 1. If it comes from plenty of Milk it must be withheld; if from corruption of the Milk, consider that which is cast up, and from thence receive the Indications

of Cure. § 2. *Honey of Roses Solutive* given inwardly is good.

§ 3. *if the Stomach is foul* you may give the most Innocent *Gillula*, and after that a little Spirit of Mint in Syrup of Quinces; anointing the Stomach also with the Oyl of Mint, Citrons, or Wormwood. § 4. *If it be caused by Worms*, you must take them away by sect. 17.

XVII. WORMS. § 1. *The breeding of them is prevented* partly by Diet, in which all decayed Fruits, Milk, Fish, Figs, things crude, sweet and fat must be avoided; for fat or sweet things breed Worms extreamly, and Parents are much to blame, who give their Children fat meat either to eat or suck upon.

§ 2. *They are taken away* by giving Prepared Harts horn steeped in their Drink, Decoction of Sebestens or its Electuary, Rouls of Diaturbith with Rhubarb, Pulvis contra Vermes.

§ 3. *But above all our Pulvis ad Lumbricos Magistralis* (which see in Our Pharmac. Lib. 4. cap. 21. sect. 27.) prevails to a Wonder: so also the powder of a Worm eaten post.

XVIII. DIABETES and Incontinency of Urine. § 1. The first is a quick and plentiful pissing of the Drink unchanged, arising from the Intense Attractive faculty of the Kidnies, afflicting with a strong and perpetual Thirst. § 2. *The parts affected* are the Kidnies and Bladder. § 3. *The Cure is difficult*, and most commonly degenerates into an Hectick; you must first rectify the Distemperature of

the Kidneys by things that dull the Acrimony of the Humors, and thicken the Blood: then give Essence of *Crolius* his *Crocus Martis*. Decoction of Harts horn, Salt of Corals; outwardly Bath with Smiths Water, and give but little Drink.

§ 4. *Incontinency of Urine* is a sending forth the same by reason of the Resolution of the *Sphincter Muscle*, or Compression of the Bladder, without any sense of acrimony and pain, and against our Will. § 5. It arises

1. *from Custom*, the Muscle appointed to shut the mouth of the Bladder, being relaxt at the least occasion; if it becomes habitual, it commonly lasts till Death: 2. *from the Stone of the Bladder*: 3. *from the weakness of the Sphincter Muscle*, proceeding from a cold and moist Distemper. § 6. *It is partly remedied* by the Nurses Diet, partly by convenient Medicines given to the Child both inward and outward: Powder of Frankincense drunk in red Wine is good, so also the Throat of a Cock roasted and dried, but above all Goats Bladder dried in an Oven and poudred and taken ʒj. at a time in Astringent Wine; Or Henbane seeds prepared and given in a fit Dose, either alone or mixt with *Diacyminum*, outwardly use a Bath of Sulphur, Niter and Oak Leaves, &c.

XIX. GALLINGS. § 1. Called also *Intertrigo*, which is when the scarf skin in the Hips and Thighs is separated from the true skin, which chiefly comes from the sharpness of Urine or

humors. § 2. First bath the place with Rose water or Plantane water; then strew over it pure Ceruse or Nibili album, or the down of Cats Tail, called in Latin Typha or Juncus Asper. § 3. For the want of these you may apply Oyntment of Lytharge or Unguentum Album.

XX. STONE in the Bladder.

§ 1. It is known by this, That the Urine is made with pain and by drops, sometimes clear, sometimes like Milk or Whey, and sometimes with Blood in it, the Child having an Itching in the Yard. § 2. Broth made with Grains of Eglantine cleansed and given for many days together is very good, using withall proper Baths and Unguents. Decoction of the Nephritick Wood; or Salt of Tartar § j. mixt with Parsly water ℥ij. then filtred and dyed yellow with Orange Peels, The poudrer of Palmer Worms, or of Goats blood dryed; prevails much in this Case. § 3. To mitigate the pain a fomentation of S. V. is good, anointing the Cods, Pubis and Perineum with the Compound Oyl of Scorpions mixt with Oyl of Bitter Almonds, Hens grease and fat of a Cony, A. § jss. juce of Pellitory of the Wall, ℥ij. § 4. You may also use the Infusion of sharp Radish Roots (scraped or sliced) in Generous Wine, mixt with the Magistery of Crabs eyes and Spirit of Salt; The Water of Persicaria or Hydropiper is esteemed above all things: if this prevails not, you must have recourse to Chyrurgery.

XXI. RUNNING of the

Ears. § 1. whether it be within the Ears or behind them, you must not be too hasty in the Cure. § 2. that which is within the Ears proceeds from the moisture of the Brain, heaping up many Excrements, for which a Childs Urine dropt into them is excellent; so also Decoction of Ivy leaves in Wine: Asses Urine in which raspings of Guajacum have been a good while infused, is commended. § 3. And no ways inferiour is honeyed Water mixt with Bulls Gall, with which last, you may wash the running which is behind the Ears also.

XXII. LEANNESS. § 1. It

ariseth either from, 1. The Milk. 2. or from very small Worms. 3. or from Diseased effluxes. § 2. If it be from the Milk, it is because it is either little or bad, which faults are best mended by changing the Nurse. § 3. If from small Worms which are generated in the Musculous parts of the Arms and Back, consuming the nutriment; they are taken away by shaving them off with a Razor, or rubbing them off with a Crust of Bread, after they have a little put themselves forth; to forward which, often wash those parts with honeyed Water or Wine: they break forth like to Ash coloured or black hairs, after those parts have been well rubbed in a Bath with Bread mixt with Honey. § 4. If from Diseased effluxes, which break forth either from them or their parts, and so are transferred. The Eyes are most subject to this, for if one earnestly

you look upon those that are squinteyed or troubled with an *Ophthalmia* or sore eyes, that person so looking is taken with the same Disease. These Diseases are prevented by avoiding the Cause, and cured after the general method.

XXIII. RICKETS. § 1. *It is a Disease unknown to the Ancients, and first (as far as I can learn) observed and taken notice of in England.* § 2. *It is called Rachitis, the Spinal Disease, and a Disease only afflicting Children.* § 3. *Its Original is from Obstructions caused through cold, moist and clammy matter, by which the motion of the Spirits is hurt: It seizes first upon the Nerves, then upon all the Membranes and fibrous parts, in which those Nerves are carried along, till at last it affects the Bones themselves.* § 4. *Hence follows the Signs, which are withredness, looseness of the parts and feebleness, they grow soft, and have a debility of motion, so that those who could have gone, after the Disease has a while seized on them, are so feeble in their Joynts, that they can neither go nor stand.* § 5. *If it grows strong upon them, they not only totally loose their going, but can scarce sit upright; and their feeble Neck can hardly sustain the Burthen of their Head; the Joynts are invaded with a numbness, and certain swelling by which the Flesh seems to hang over; this is mostly in the Wrists and Ancles, the Breast grows narrow, with Knotty*

Excrefcencies upon the Ribs; the head is of an unusual bigness; the fleshy parts beneath the head wast away, the Bones grow crooked, chiefly those of the Legs and Arms below the Elbow; the Teeth cut slowly and with trouble, the Belly swells, they have a Cough and shortness of Breathing, with a weak and small Pulse, and love not sweet things. § 6. *The Cause may be partly from taking Cold, and application of cold and moist Linnen, by which sometimes the Pores are closed, and a Congelation of Humors is caused; as also keeping the Child in a cold and moist Air: and partly from meat and drink, cold and moist, or too thick, tough and hard of digestion; or on the contrary, giving things which are extream hot and of a biting quality: and partly for want of its due motion, exercise or rest; as also from perpetual clogging of the Stomach with Food and preceeding Diseases, proceeding of Cold and Moisture, Consumptions and such as cause Leanness.* § 7. *The Prognosticks in General, declare it not mortal; if it be not extream, Age overcomes it, but if it be Violent and Complicate, it ends in Death: So also if the Back bone be weak and grows out, the Neck not able to support the Head, afflicted with an Hydrocephalos, the sutures especially being open; or if there be joyned with the Disease an Asthma, Feaver, Pleurisy, Phthisis, Dropsy, Pox (from its Parents, or by sucking a Pocky Nurse)*

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Kings Evil, violent Coughs, Convulsions, painful breeding of Teeth, &c. however if the Child dies not, 'tis in a dangerous Condition. § 8. *The Cure is also difficult*, if it begins soon after the Birth, the head very great and the Body lean, or the Child very unwillingly suffers its Knees to be drawn upwards or extended downwards: so also if the Teeth wax black and fall out by pieces; the Arms and Legs grow very crooked, and there be great Tumors and bending of the Joynts. § 9. *But if they can endure motion, or stirring or shaking*, have scabs, wheals, pimples or itch, and being well looked to, the Symptoms decline, there is good Hopes. *If the Tumors of the Ribs and swellings of the Joynts be great*, the Disease will be of long continuance. § 10. *It easily invades Children of Delicate Parents*, such as suck Red Hair'd Nurfes, and such whose Thighs and Shin bones grow very thick. § 11. *If it continues for above five years*, the Patient commonly becomes a Dwarf, or has a very sickly life. If they are Asthmatick, Cachectick, or Consumptive, they either dye young, or else grow Deformed and Crooked: Lastly, Girls are more easily cured than Boys. § 12. *The Cure.* It is considered. 1. In Diet. 2. In Chyrurgery. 3. In Physick. § 13. *The Diet* ought to be hot and dry, and of easy Concoction, given oft and by Degrees. § 14. *Chyrurgick Operations.* And they are convenient fontinells or issues, which

are rather to be made by Incision than Caustick; the places are either the Neck or between the Scapulas on both sides the Back bone: and if need requires you must use Cups, Vescatories, convenient frictions, Roulers and Boulsters, to bind and strengthen the parts: let the Frictions begin at the Back Bone, the Child being laid on his Belly; after let them be exercised in a proper Swing, or swing them by holding them under the Arms, &c. § 15. *Physical means.* Be sure to keep the body open either by Clysters or Lenitive purgers: the Clyster let be according to the humors that abound, if water and flegm *Enema Hydragogum*, otherwise *Enema emolliens Schroderi* may indifferently be used. § 16. for a gentle Purge you may use *Manna* mixt with *Cassia* new drawn and poulder of Aniseeds, with which you may purge for fifteen days or more, at fit times: otherwise the fine poulder of Aniseeds given *à gr. xv. ad ʒss.* mixed with Pap and given by the mouth a day or two or more after it is Born, yea till it is half a year old, purges delicately, casting out a green matter absconded in the Guts, which for the most part torments Children: § 17. *If they have an ill or weak Stomach.* give a Vomit made of *Sal Vitrioli* *à ʒss. ad ʒj.* or ʒss. it will do Wonders; and if the Child has Worms kill them: if Convulsions be feared, give it in *Aqua Epileptica Langij*, § 18. *For the want of Sal Vitriol* you may give

give *Unium vel Oxymel Scilicet*: if the Child can endure it, give once a Week; otherwise once in a fortnight *Syrupus de Spina Cervina*. § 19. The Body being thus fitted and prepared, and kept so, you must now use Specificks, among which *Syrupus de Scolopendrio* given for 3 or 4 months is none of the meanest: Or this, *R Barkes of Tamarisk, Ash, Ioy and Caper Roots, Cremor Tartari, A.* § 19. infuse them 24 hours in a Quart of stale Ale, of which let the Child Drink, 'tis certainly an excellent thing. § 20. So also *Tinctura in Scurbo Lienis Mylij, Tinctura Martis Myrschti*; as also *Tinctura Cholagoga, Phlegmagoga, Melanagoga, Hydragoga Grulingij* given according to the humor abounding. § 21. If Worms, *Struma* or *Lues Venerea* are feared & *dulcis cum R. sicc. Fallapæ* is excellent, so also *Tinctura Cathartica Clossæi*. § 22. If the Disease is accompanied with profuse sweating, it ought not too hastily to be restrained; but if it continues very long and inordinate, there is a necessity of its speedy prohibition, lest it brings the Sick into an incurable Consumption; it is best done by fit Purgings, which is chiefly performed by *Tincture of Sena*, or *Infusion thereof in Wine*, or with *Syrupus de Spina Cervina*. Sometimes also Acids, as *Spirit and Oyl of Sulphur, Vitriol or Salt*, being given in S.V. or other proper Vehicle, and fit Dose admirably stop the *Diaphoresis*. § 23. For outward remedies, *Our Balsam of Amber* to Anoint the Stomach, Ribs, Back bone

and Joynts withal, is of wonderful Succets: Or this, *R Oleum Hyperici* § 1. *Olei Succini* § 1. mix and anoint therewith, applying over the weak Joynts this Emplaster. *R Aloes (dissolved in S.V.)* § 1. *Honey* § 1. *Oyl of Hypericon, Wax, A.* § 1. *Oyl of Nutmegs by expression* § 1. mix, evaporate the S.V. neerly, and make a Plaster to be applyed to the Stomach and Joynts.

XXIV. CONSUMPTION.

§ 1. It is caused either from badness of the Childs Milk and Dyet, or ill looking after, or from its Birth or Diseased effluxes. § 2. The ill Diet and looking after, is remedied by changing the Nurse. § 3. If from thence ill humors are bred, they ought to be carried off, the Obstructions being first removed, and then strengtheners and restoratives to be adhibited, such as are *Consist of Alkermes, Syrup of Quinces mixed with Pulvis ex chelis Cantharorum, Sal Prunelle* or *Spirit of Mint*; anointing the Stomach and Belly with this. *R Oyl of Mace* § 1. *Unguenti de Artanita, Olei Succini A.* § 1. *Oyl of Wormwood* § 1. mix: and anoint therewith morning and night for 20 or 30 days together. § 4. If from Diseased effluxes (which is common in several Diseases, as in an Ophthalmy, if one earnestly look upon one troubled with that Disease, he is taken with the same, so also in a Consumption, especially) where it proceeds from an Ulcer in the Lungs. § 5. In this Case first open with Pectorals and Volatile Sal Armoniack; then gently cleanse: after give

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Decoction of Colworts, Or Syrup of Turneps for many days: lastly Anoint with the aforegoing Oyl at § 3.

XXV. WITCHCRAFT :

§ 1. Where this is suspected, the best way will be to Attempt the Cure by way of Amulets.

§ 2. Among the Medicines which Destroy the power of Witchcraft, the Herbs *Vervain*, *Hypericon*, *Fern root*, and *Plantane root* have the Precedency, being dried and worn about the Neck: So also the Oyl of *Hypericon* simple or Compound, and that of *Ellenberghus*, all which you may see in Our *Pharmacopœia*.

§ 3. Among Stones *Amber* and

Coral are preferred as very excellent; and no ways inferiour is the *Loadstone*. § 4. Among Minerals we commend *Gold* (given by the King of Englands hand:) Then *Native Cinnabar* and *Quick-silver* (which may be put into a Goose Quill; or which is more Sympathetical into a Hasle Nut shell, and Sealed up therein, with hard Wax:) These you may hang about the Neck when *Luna* is in conjunction with *Mercury* in his own House, and they both in Trine to *Sol*, and if possible to *Jupiter* also: not forgetting withal to anoint the part pained. with some of those Oyls of *Hypericon* aforesaid.

CHAP. XXIII.

Of Pains in general.

PAins if not vehement are eased with *Anodyns* chiefly, as Oyl of Lillies, Earth Worms, Roses, *Unguentum Martiatum*, a Cataplasim of Crums of Bread, Milk and Saffron boyled together, *Unguentum Nicotiana*, with many others.

II. But if vehement, with *Narcoticks*, as *Opium*, our cooling Oyl, *Unguentum Populeon*, Sugar of Saturn.

III. If inward, either with *Carminatives*, as *Oleum Piperis*, *Baccarum Juniperi*, *Spiritus Carminativus*, *Abfynthij*, *Oleum Carvi*, *O. Compositum*; or with *Narcoticks*, as *Essentia Opii*, *Spiritus*

Anodynus, *Laudanum nostrum vel Paracelsi*, *Confectio Anodyna*, Elixir of Camphir, *Narcotick Sulphur* of Vitriol, *Ens Veneris*, &c.

IV. If it comes from heat and dryness, then the part is red, use then our cooling Oyl, *Unguentum Populeon*, seeds of Poppys, Oyl of Poppys by expression, Henbane, Tobacco, &c. but if from cold and dryness, where the part is blackish or blew, use things hot and moist, as are *Ol. Elder*, *Basilicon*, *Linimentum Arcei*, Hogs grease, *Pomatum*, &c.

V. If it comes from solution of unity, either by flux of soft humours,

mours, which stretch; or sharp, which fret, purging is required.

VI. Or from Winds which tare, then use our Carminative spirit, and if it be in the Bowels make a Clyster (with Milk, Honey, and a little of our *Oleum Compositum*, and Salt) which exhibit, giving inwardly either our specifick Anodyn, *Saccharum Saturni*, *Ens Veneris* or Narcotick Anodyn of Vitriol in *Theriaca minor*, or some cordial Water; or you may exhibit *Confectio Anodyna in Aqua Papaveris*; or *Laudanum Minerale Hartmanni*.

VII. Or from outward Causes, (as bruising, cutting, pricking or burning) then have recourse to the prescripts of the subsequent Chapters. This following Cataplasim is said to be of great force. *Rx flowers of Dill, Camomil, A. M j. Elder M j. ss. Linseed Meal ℥iv. Oyls of Dill and*

Hypericon, A. ℥vj. mix with Milk and boyl to the thickness of a Cataplasim. Or this, R Mucilage of Fleawort seeds, ℥jss. Yolk of one Egg, Saffron ℥j. Oyl of Hypericon or Camemil, ℥ss. mix and make a Linament.

VIII. If from the Reins or Bladder, it is either from the Stone, and then Oyl of Cardamoms in *Periscary water* is singular: but if it is from other kinds of Obstructions or Inflammation and scalding of the Urine, you will find *Sal Prunella* dissolved in Broth of Tamarinds to be inferior to no other thing. To this add *Elixir Camphoræ*, *Trochisci Albi Rhafis*, *Trochisci Camphoræ*, Distilled Oyl of Juniper berries from gut. vj. ad xij. dropt upon white Sugar and well mixt therewith, and exhibited at night going to bed, and in the morning fasting in a Glass of *Periscary water* aforementioned.

CHAP. XXIV. Of TUMOURS.

Λευμὼν, *Pblegmon*, A Tumor coming of Blood, or an Inflammation.

§ I. If the Body be repleat, first Vomit once or twice with *Sal Vitrioli*; then purge, because sharp humors cause the Flux, then with Alteratives, as *Syrupus Diacodium vel Succorum*, in Poppy water cool the blood;

then repell, by applying Cloaths wet in Frog-spawn water boyled with Myrrh; or a Lixivium of Quick lime boyled with Wax and Oyl of Roses; or the whites of Eggs beaten with Rose-water or Vinegar, and mixt with a sufficient quantity of fine Bole, or *Lapis Hamatitis*; or a Cataplasim made with *Unguentum Populeon*, mingled with

with Bole Armoniack; Or of Milk, Bread, Yolks of Eggs, and a little Saffron. § 2. In the declination foment with a decoction of Althea, Origan, Roses and Camomill made in White wine with a little Honey, or anoint with Martiatum, Goose greafe, or Unguentum Nicotianæ, applying Emplastrum Diacalciteos. § 3. The Indications of Cure are four: first, Diet which ought to be slender and little, and that cooling; avoiding all hot, sweet, fat and spicy things, as also all violent motions, especially of the part, and all such things as bind the Bowels, together with Anger, Venerie and the like. § 4 Secondly, To stop the farther flux of the humors, which is done by purging and repercussion: if you purge, consider whether the Stomach be foul or not; if it be, first exhibit Oxymel Sciliticum, a sufficient quantity to cleanse it; which done, purge with Our Aloetick Elixir, or Pilulæ Alephazinae, but the former is better: In the mean season apply Repellers outwardly, as Quince Seeds, Galls, Balaustians, Roses, Oyl of Roses Omphacine, Acacia, Sanguis draconis, Vinegar, Red Wine, leaves of Cyprus, Plantane, Oak, unripe Bramble berries and Mulberries, Roots of Bistort and Tormentil, Whites of Eggs, Alum, fine Bole, red Sanders, Oyl of Myrrles, powder of dried Toads; excellent also are the Cataplasma Fabritij, Anacolema Schroderi, and Cataplasma contra Cruorem, the which you may see in our Pharmac. Lond. lib. 5. cap. 7. sect. 7. 13. and 14.

But you must be cautious of repellors; first, when the humours flow to the Emundories: secondly, when they are either malign or Critical: thirdly, when the part affected is very weak and the pain vehement: fourthly, in a Plethory or Cacochymy: fifthly, where the Phlegmon is about some noble part. § 5. Thirdly, You must resolve, which is done by Discussives, first Internal, as Spirit of Sal Armoniack given in a Glats of Rhenish Wine or Sack, and other things given to resolve Pleurifies: secondly, external, as Roots of Galingal, Orice, leaves of Dill, Parsly, Smalage, Southernwood, Rue, Savin, flowers of Mellilot, Camomill, Elder, Seeds of Annis, Carraways, Commin, Juniper berries; Gum Ammoniacum, Bdellium, Sagapenum, Tacamahacca; Goose, Ducks and Hens greafe; Oyls of Dill, Nard, Rue and Bays; Unguentum Aragon, Martiatum, Oxycroceum, Leaven, the Dung of Beasts, Cataplasma de Fermento, Cataplasma Resolutivum Foresti, & Rondeletij: But the strongest of all are Niter, Sulphur, Lime, &c. If all these things avail nothing, you must come to suppuration with such things as these, Roots of white Lillyes, Marsh mallows, Onions roasted, leaves of Mallows, Marsh mallows, Sorrel, Wood Sorrel, Camomill flowers, Figs, Galbanum, Bdellium, Sagapenum, Ammoniacum, Fat of Hogs, Geese, Ducks, Hens, Oyl of White Lillyes, Unguentum Dialtheæ Simple and Compound, Basilicon, Empl. Diachylon,

lon, of Mucilage, cum Gummi and Melilot. This following is Excellent. *R* Onions roasted in Embers ξ ij. Roots of White Lillies, and Marsh Mallows, *A*. ξ j. Saffron in powder \mathfrak{z} j. beat all together with a little Leven: then add Basilicon ξ j. Ducks and Goosegrease, *A*. ξ ss. Venice Soap \mathfrak{z} ij. Honey, Meal of Linseed and Beans, Yolks of Eggs, *A*. q. s. mix and make a Cataplasme. 6. The Last intention is the removal of Symptoms, the chief of which are; first, great Inflammation of the part, (wherein you must beware of Oyl and Oily Bodies:) Secondly, a Fever: Thirdly, a Scirrhus hardness; Fourthly, a Gangreen: Fifthly, Vehement pain: concerning all which see their proper Chapters. When broken, or after Incision, you must use digestives and abstersives as in Ulcers; among which Sylvius de le Boe commends Balsamus Sulphuris Terebinthinatus, as a thing having wonderful effects.

II. *Bæſow, Bubo*, an Inflammation of the Glandul's.

§ 1. Excellent is the Balsamum Sulphuris to anoint with, applying the Diasulphur Emplaster, See Our Pharmacopœa lib. 5. cap. 6. sect. 63. or Emplastrum Hystericum, &c. but if it will not be dissolved, then suppurate it, by anointing with Butter of Antimony, or with this Ointment, (made of Oyl of Camomil \mathfrak{z} iv. Saffron \mathfrak{z} i. and the yolk of two Eggs) applying it hot, and repeating it often; when it is broke, cleanse, draw, and heal, as in other Ulcers.

§ 2. The Intentions of Cure are the same as in a Phlegmon. In a

benign Bubo, gentle purging may do good: Sweating in a Bubo's is very good: Bleeding extreamly ill, so also repellers for they strike back that into the Inward parts, which nature did cast forth for her relief: Scarification ought not to be used unless in malignant tumours, nor Leeches, unless very much inflamed. § 3. If the pain be violent, it ought to be eased with Anodyns as the Linament, in Cap. 21. Sect. 7. Or this Cataplasme. *R* Mallow leaves \mathfrak{Mj} . Meal of Althea Roots, and Fennigreek seeds, *A*. ξ ij. Barly Meal ξ j. Ducks Grease, Oyl of Dil. *A*. ξ ss. boyl all in Milk to the thicknes of a Pulvis. § 4. You must resolve by Discussives, such as we have mentioned Section I. foregoing; But Ceratum de Ammoniaco Forreſti (in Our Pharmacopœa Londinensis lib. 5. cap. 5. sect. 4.) is inferiour to none. § 5. If it yields not to Discussives, you must suppurate with very strong Attractives, such are Roots of Aron, Birthwort, Briony, Cresses, Cantharides, Castor, Dittany, Ranunculus, Pellitory of Spain, Leeks, Nettles, Galbanum, Euphorbium, Succinum, Sulphur, Leaven, Quicklime, Black-sope, Garlick, Figgs, Onions, Mustard, Ox-Gall, Pigeons dung, Goats dung, Niter, Diachilon, Oxycroceum, Mithridate, Venice Treacle. In this Case the Cataplasma Laxativum Schroderi is good, so that pro adultis as also the Dropax Consortans: Or this. *R* Roots of Pellitory of Spain, Mustard, *A*. ξ ss. Sale \mathfrak{z} vj. Treacle of Andromachus ξ j. Onions, Pidgeons

ons dung, A. ℥ij. Figs N°.xij. Leaven ℥jss. dissolved in Vinegar, enough to make it into a Cataplasm. Some take a Chick, Pidgeon or Frog, divide it in the midst, and apply it warm to the part; others apply the Anus of a live Hen or Pigeon, the Feathers being pulled off; but it is best forthwith in the beginning to apply a Vescatory thereto, the next morning to open the Blister, and then to apply the Attractives. § 6. The Bubo being suppurated, let it be forthwith opened, and that rather by Incision than by Cautey: keep it open till the tumour is wholly dissolved, and the Ulcer cleansed; then heal it after the manner of other Ulcers. § 7. In a Pestilential Bubo, neither Bleeding nor Purging is to be used; Sudorificks and refrigeratives are good; outwardly, you must apply strong attractives in the beginning. § 8. The same is to be observed in a Venereal Bubo, (so long as there is any hope of Curing it by external Remedies) least the malign matter which nature has thrust forth, should regurgitate, and so cause the Pox: the suppuration is to be endeavoured by all means, and then forthwith, although not perfectly ripe to be opened. If it be tough, Cupping Glasses should be applied. § 9. If the whole mass of Blood is infected, you must mannage the Cure then, as in the Cure of the Pox. In this Case our Quintessence of Guaiacum and Sassafras, drunk in good Beer or fragrant Wine is excellent. § 10. If it be Critical, whereby the Sick is dischar-

ged of his Disease, and the signs of a good Crisis appear, then nothing is to be meddled withall, but the whole business is to be committed to nature: but if the Crisis be imperfect, the humour is to be attracted to the part by Cupping Glasses, and Medicaments of Leaven, Black-Sope, Old Hogs-grease, Rosin of the Pine, Diachylon with Gums, &c.

III. *Avθελξ, Carbunculus*, a burning Coal.

§ 1. Anoint the top of it with Butter of Antimony; then apply the Oyntment at Sect. 2. till the Carbuncle falls off; then apply the magnetick Emplaster, See our Pharmacopœia Londinensis lib. 5. cap. 6. sect. 82. till it is sufficiently cleansed, and then heal it. If all this fails, you must use a Cautey, either actual or potential, and then cure it after the manner of a common Ulcer. § 2. If it be not malign, you are to order, The Diet of the Sick to be cooling and moistning. § 3. Strong openers inwardly, such as are Spirit of Sal Armoniack, Harts-horn, Mans Skull, &c. given in fragrant Wine. § 4. Then Gentle purging with Cassia Fistula, Manna, Tamarinds, Cream of Tartar, &c. § 5. Scarrification upon the Part, which is to be iterated, if the Blood require the same. Where note, That the place being Scarrified, you are not to apply those Medicines that are usual to be laid on, (for that they promote the Pus or putrefaction, and so encrease the rottenness) since that a Carbuncle in putrefying always creeps and

and spreads, so that many times a mortification happens to the part; but rather those Medicines, that are drying, and such as resist Putrefaction, applying them to that end, three Fingers breadth round about the Carbuncle, afterwards apply this Cataplasm, which is good. *R Venice Treacle, White Vitriol, A. ℥j. Honey of Roses ℥ij. Leven, Turpentine, fresh Butter, A. ℥ij. Soot ℥ij. black Soap ℥ij. Mustard Seed, Saffron A. ℥ss. Yolks of Eggs N^o. iij. make a Cataplasm, S.A.* A Liniment of Bole Armoniack, and Oyl of Roses is good also.

§ 6. The part being scarrified let it be washed with Salt Water warmed.

§ 7. After washing apply such things as resist putrefaction, made especially of Scabious and Devils bit, bruised well, being green and mixed with the yolk of an Egg, old Hogs-grease, and a little Salt, which renew often.

§ 8. If Scarrification help not, you must use Burning: But so, that you presently anoint the Crust with *Ung. Egyptiacum*, or apply thereto the former Cataplasm at

§ 5. to make a separation of the Eskar. § 9. The Eskar or Crust being removed, the Ulcer must be cleansed with *Ung. Egyptiacum*, *Ung. Fuscum Wurtzj.* Honey of Roses, &c. § 10. If it be Pestilential,

you must use Antidotes both Internally and Externally, among which *Theriaca Londinensis nostra* is chief.

§ 11. All possible diligence must be used to hinder the putrefaction from spreading and to break it, according to what is first declared in this Section; to which add the Oyl of Mercury,

the Elixir pestilential of *Crollius*, *Juel's* Cataplasm of Radishes beaten with Rose Vinegar.

IV. *Εγχύμασις*, Gangrena, a mortification.

§ 1. It is prevented from spreading, by fomenting hot with a Lixivium, in which *Scordium* and roots of *Scorzonera* are boyled; or strong camphorated spirit of Wine. Anoint the affected round with Oyl or Butter of Antimony, and by this means the putrefaction will be seen apparently to go no farther; and that the dead parts may not corrupt the living; separate them by help of the Chyrurgion; or else apply our *Oleum Narcoticum*, in which to ℥i. let ℥i. of ☿ sublimate, or Turbith mineral be dissolved, till the Oyl look red; which will perfectly cleanse all foetid Ulcerations, separate the Gangreened parts from the living, remove the putrefaction, and yet not touch the sound. § 2. Mean season prepare the Body with *Decoctum traumaticum*, vel *scabiosae*, and give every morning ℥ss. of our *Panchymagogen vegetabile*: If the former things help not, burning must be used, presently anointing the crust with *Agyptiacum*, or applying a Cataplasm of Orobis meal and Oxymel simple; then the Crust being removed, cure it after the manner of other Ulcers. § 3. The Cure is accomplished, first, by convenient diet: secondly, by due Evacuation: thirdly, by strengthening the Heart, against putrid Vapours: fourthly, by defending the sound part against the spreading of the

Mortification. The Diet let be cooling and drying: The Evacuation let be chiefly by Sudorificks, such are Treacle water, Dia-scordium, Mithridate, Venice Treacle, Our London Treacle, Quintessences of Rosmary, Rue, Sage, Time, Orange Peels, Citron peels, Cloves, Nutmegs, Sage, Angelica, Antimony, Diaphoretick, Bezoar, Mineral; *Liquor Viæ*, Salts of Wormwood, Carduus, Self-heal, &c. Strengthen the Heart with Bezoar, Confect of Alchermes, Quintessence of Angelica, Saffron, Cochinele, *Aqua Cardiaca Paracelsi*. Defend the part with Flowers of Sal Armoniack, or *Sp. Salis Armon.* mixed with Spirit of Wine; or with Lye, Brine, Urine, Spirit of Urine, Treacle, *Ung. Agyptiacum*, *Fuscum*, Horse dung, *Cataplasma de fermento*, *Resolutivum Forresti*, & *Cataplasma Fabritij*, (see our *Pharmacopœa lib. 5. cap. 8. sect. 1. 7. II.*) § 4. If the former things do not, then Cupping Glasses and Leeches, but chiefly Scarrification must be used. § 5. If it be caused from Cold (whilst it is yet red with pain and not grown black) the part must be plunged in cold water, or bathed therewith, or with Snow, then placed at the Fire, but not too near, giving inwardly Venice Treacle or our London Treacle, Or rather Quintessence of Rosemary or Angelica. When the cold remits, and the heat returns, Embrocate or rub the part with the Solution of the Flowers of Sal Armoniack, or *Sp. Sal Armon.* in S. V. very warm, Or with Oyls of Dill, Camomil, Earthworms mixed

with $\frac{1}{3}$ of Oyl of Juniper-berries; Or with Decoction of Turneps. If it be already mortified, then scarrify and continue the use of the former things, § 6. If it be caused from External heat, then prescribe a cooling diet, purge gently the hot humours, scarrify the part, and wash it with *Diachisma Frigidum*, to a pint and half of which put Vinegar half a pint, Salt an Ounce and half, then use *Agyptiacum*, &c. but proceed not to an actual Cautey, unless necessity force it. § 7. If from the Ligature hindering perspiration; then the binding must be forthwith loosened, Medicines discussive and non-putrefactive applied, being first scarrified and washed, as aforesaid. § 8. If from defect of Nourishment, or Atrophia, so called, let the diet be hot and moist, and nourishing: anoint with mollifying Oyls, as of Earth-Worms, Vipers, Scorpions, Mans fat, Bears fat, Hens greafe, but avoid discussives and dryers, then draw nourishment with Cupping glases without scarrification. If yet the Gangreen proceed, you must scarrify, and do as before. § 9. If it be from the bitings of venomous beasts, or a malign humor, you must use Sudorifick, cooling, and Cordial Medicines: then draw out the Venom by an Actual Cautey, or Scarrification; after apply attractives, and such as resist Putrefaction: Lastly, cleanse the Ulcer arising by the Launcing or Burning, wherein S. V. may be of good use, more especially if mixed with Flowers or Spirit of Sal Armoniack. § 10.

§ 10. If it be from the Scurvy, you must order a drying diet, with cooling and Cordial Medicaments; giving after Sudorificks, which must be closely followed in this case, such are *Vincetoxicum*, *Diatamnii* of Creet, Our London Treacle, but the chief is our Elixir of Rue: then applying outwardly *Emplastrum de Galbano Mynsichti*, or *Balsamum Stomachicum Regium*, Or fomenting with Quintessence of Angelica. If these things do not, you must scarrify, apply Cupping Glasses, Leeches, &c. to the part; then wash with Salt Water or S.V. in which Flowers of Sal Armoniack are dissolved; after apply *Ung. Egyptiacum*, or some resolving and drying Cataplasm. If no amendment be yet, you must come to Cauteries, either Actual or Potential, as Butter of Antimony, Mercury dissolved in AF, and precipitated with Oyl of Tartar, &c. And Lastly, in due time to remove the Crust, least new Putrefaction breed under it. § 11. If the Gangreen be degenerated into *Sphacelus*, the Cure is done by cutting off the part, as we have taught in the beginning of this book.

V. *Gutta rosacea*, redness, or red pustles in the face.

§ 1. Let the body be often purged with *Extractum Rudi*, mixed *urcanum Coralinum*, gr.v, to ℥i. of the Extract; then cool the blood with Syrup of Coral taken in *Aqua papaveris*, or infusion of Succory roots; then *R Maack*, *Camphir*, and *Frankinsence*, dissolve in spirit of Wine, and

wash therewith morning and evening for a quarter of a year; or wash with a *Lixivium* of Colewort ashes, and anoint with our *Ung. rubrum*; or with Oyl of Wax mixt with *Ol. Tartar per deliquium*, ana: Or, with the Menstrual Blood of a Virgin. But Oyl of Toads is above all others most powerful, and only to be used when other things fail; with which, if the face be anointed for certain days, (once a day) the Wheals and Morpew will fall off, and the redness will vanish.

§ 2. Some commend the Blood of a Hare to anoint with at Night, and to wash it off in the Morning with Water of Mullen Flowers. Others wash with this. *R Alum* ℥vj. juyce of *Plantane*, *Sowthistle*, *Sorrel*, *A.* ℥xij. *Whites of Eggs*, N^o x. being all well beaten together, let them be distilled in an Alembick, and keep the Water for Use.

§ 3. Some use Oyntments, as the Oyntment of Pilewort made with May Butter; Or this, *R Ginger*, *Grains*, *A.* ℥iv. *Sulphur Vire* ℥ij. *Hogs Lard* ℥j. mix and make an Oyntment: use it Morning and Night for fourteen days, washing before you use it in the Morning with a Decoction of Wheat Bran. Or this, *R Mercurius dulcis*, *Saccharum Saturni*, *A.* ℥j *Camphir*, *Sulphur Vire*, ℥ss. *Hogs Lard* ℥ij. mix, and anoint therewith: this is without Comparison.

§ 4. *Sennercius*, advises to these things following, *R Wheat Bread*, macerate it in Goats Milk, beat it with the *Whites of 20 Eggs*; to which add *Camphir* ℥j. *burnt Alum* ℥ij. mix and destil:

F f 2

Or

Or this. *Rx* Litharge ℥ss. Vinegar ℥iv. boyl to the third: in another pot boyl Salt and Alum, A. ℥ss. Frankincense ℥j. Rose water, half a pint: mingle these Liquors, strain, and keep the mixture for use. Or this. *Rx* Sulphur ℥ij. Camphir, Salt, A. ℥ss: Ceruse, Litharge of Silver, A. ℥ii. all being in Pouder, mix them with waters of Beanflowers, Roses, White Lillys, Solomons Seal, A. ℥ij. Or this. *Rx* Camphir ℥j. grind it in a Mortar with Oyl of Sweet Almonds ℥iij. then put to it Oleum Tartar per deliquium ℥ij. Yolks of Eggs Noij. Saccharum h ℥ss: mix them well, and put thereto Waters of Bean flowers, White Lillys, and Strawberries, A. ℥ij. Or this. *Rx* Camphir, Litharge, Burnt Alum A. ℥ss. White Vitriol, Frankincense, A. ℥j. Sulphur Vive ℥jss. being all in fine Pouder, mix them with Rose water and Bean Flower water.

VI. *Ἐρυσίπelas*, Ignis sacer, Anthones fire.

§ 1. If the body be Cacoehymick; purge with proper Cholagogues; sweat gently with Antimonium Diaphoreticum, Bezoardicum minerale, vel solare in tinctura Corticij; then apply things liquid and thin, as a decoction of Myrrh and Olibanum in Vinegar, hot; a Cataplasim of leaves of horse-Radish with Frogspawn water; or our Unguentum rubrum, or foment with water in which Saccharum Saturni is dissolved, then anoint with Oleum Rosatum, letting the sick keep a moderate diet, drinking clarified Whey, (if it can be had) during the course of the Cure: § 2. If the Body is plethorick and grosse,

give Spirit of Sal Armoniack in Spirit or Quintessence of Camomil; in which if you so please, you may dissolve some Venice Triacle, to provoke Sweat, and thoroughly open the Pores. § 3. What you apply outwardly let be liquid and thin, and often renewed, the chief of which are *Lapui Medicamentosis Crollij* (in Our Pharm. lib. 4. cap. II. Sect. 49.) Menstrual Blood dissolved in Groundsel Water and Rose Vinegar; and Decoction of Red Myrrh and Olibanum A. ℥j. in Wine and Vinegar, A. ℥iv. § 4. Purgation with the cooler sort of Cholera purgers, among which Castia Fistula, and Syrup of Damask Roses are chief. § 5. If it be a simple Erysipelas after general Remedies, cooling Topicks are to be applyed, after which the discussion must be left to Nature. § 6. You ought to avoid the application of Oyls or any fat thing, because they increase Putrefaction by stopping the Pores. § 7. So also you ought to avoid Repellers, except the Erysipelas be very little, and the part affected be remote from the more Noble parts, as also the humours be Fluxil, and then you ought not to use them without Discussives or Resolvents mixt with them. § 8. These things strongly draw forth the heat, Diapalma dissolved in Vinegar: Or leaves of Tobacco, Coleworts and Henbane, bruised and applyed: Or, Sheeps Dung boyled in White Wine Vinegar: Or, Flowers of Elder, Mellilot, and Camomil boyled in New Milk: Or Chalk scraped and laid upon the part, laying Cap Paper over it, which

is excellent: Or, this fomentation, *R. Red Myrrh in powder ʒij: Saccharum Saturni ʒj. Camphir ʒj. Opium gr. xxv. White or Rhenish Wine ʒvj.* dissolve in a gentle heat, and dip linnen Cloths in it, applying them warm, and often renewing them. Or this. *R. White Treacle of Rhasis ʒj: Camphir ʒj. S.V. ʒj. Elder Water ʒvi:* mix and apply as before. § 9. *If the Erysipelas be in the Face,* the Fumes of Olibanum and Mastich may be used five or six times a day. § 10. *If it be Ulcerous: R. White Troches of Rhasis ʒij. Red Mirrh, Litharge of Gold, A. ʒj. flowers of Sulphur ʒss. Sarcacol ʒij. Whites of Eggs,* enough to make it into a Liniment, which apply to the part afflicted.

VII. *Ερπης, Formica,* the Shingles.

§ 1. *Let the body be purged of Cholera,* then cool the part affected, by anointing it with Oyl of Cream and Housleek; or bathing them with a strong Lixivium of Beech-ashes, using after, either our Pomatum, or Unguentum rubrum; when they are broke, wash often with Lime water, and dry them with Sugar of Lead. § 2. *But the compleat cure respects,* first the evacuation of the whole Body, which you may effectually do by Refin of Jallap, mixed with a third part of Mercurius Dulcis: the Pills of Bonetus, are excellent. § 3. *Secondly,* by gently cooling the part, which you may do with Unguentum Album Camphoratum, especially if you mix with it a little Saccharum Saturni. § 4. *If the*

*heat will permit, you must use digestion, and discussion by dryers; oftentimes to moisten them with ones Spittle is admirable. And the Powder of Lapis Scissilis mixt with Vinegar, is used with good success. Or, Mustard boyled in Butter, to which some add Gun-powder. Or Lye, mixt with Urine, Or Unguentum Fuscum Wurtzij. Or Powder of Chalk mixt with Cream and applyed, the part being first fomented with hot Lees of Wine. Or Emplastrum Stricticum Crollij. § 5. If it be Herpes Miliaris, or a simple Herpes, which lodges only under the Epidermis or Skarfe skin, and breaks out like grains of Milet, you must use things cooling and drying, if it be before they break: but if they be broken, you must cleanse with water of Quicklime and Sugar of Lead: Or a Decoction of Arsmart, and Raspberrie leaves in Water and Wine. § 6. If it be an Eating, devouring, or rebellious Herpes, which spreads in breadth and depth, lasting long, and being unattended with a Fever, (by which it is distinguished from an Ulcerous Erysipelas) you may apply upon it Emplastrum Diasulphuris Rulandi: Or this Ung. *R. Unguenti fuscii Wurtzij ʒiij. Album Camphora ʒjss. Ceruse, Sulphur, Myrrh, A. ʒj. Litharge ʒjss. & Dulcis, Viridigrise, A. ʒjss. Oyl of Roses q.s.* mix and make an Oyntment. Or this. *R. Flowers of Sulphur, Ceruse, Camphir, A. ʒjss. Lapis Prunella, Saccharum Saturni, Mercurius dulcis, A. ʒij. Old Rape Oyl, or Oyl of Scorpions, q.s.* mix, and make a Liniment.*

VIII. *Kynopids, Pruritus, the Itch.*

§ First, *purge the body well with our Panchymaggon vegetabile* ℞. at a time, mixed with *Arcanum Coralinum* gr. iv. or else with *Mercurius dulcis* ℞j and cooling the sharp humour by drinking Whey: or you may purge with our *Diajallapa*, or *species Cathartica*, or *Diaturbith*, all mingled with *Mercurius dulcis*, as before, and then cool, by taking often Crystals of Tartar, or Tincture of Coral in Whey. § 2. Then anoint all over with *Unguentum Populeum*, or the Joynts only with our Mercurial Oyntment, which is better: and lastly let the sick wash in a bath made of *Parietary*, Mallows, Docks, Alum and Vitriol, sitting in it with the whole body. § 3. *Whey of Goats Milk with juyce of Fumitory*, given to three pints at a time, is excellent in this case, after the Antecedent cause is taken away, as aforesaid: Or by Refin of Jallap and Syrup of Peach flowers: Or by provoking the Courses or Hæmorrhoids if stopped. § 4. *You may Bath often with fresh water Baths*, in which Quicklime has been cast: Or you may make a Discussive Bath with *Parietary*, Mallows, sharp pointed Dock, wherein Alum, Sulphur, Vitriol, &c. is put. § 5. *Senertus tells us, first, that the humors are to be prepared and attenuated*, by coolers and moistners, as Endive, Succory, Borrage. Bugloss, Fumitory, Hopps, Maiden hair, Asparagus roots, Polypody, Mother of Time, and Syrups made of these. § 6. Secondly, *that the humours be e-*

vacuated by the Leaves of Sena, Polypody, Black Hellebor, Jallap, Compound Syrup of Polypody, Diacatholicon, Confectio Hamech, Extractum Melanagogum, Extract of Black Hellebor. § 7. *Thirdly, That the Courses or Hæmorrhoids suppressed, be provoked*, if Age and Strength will permit. § 8. *Fourthly, That the diet be cooling and moistning, and easy of digestion*; the Air cold and moist; and the habit of the Body altered, by eating Borrage, Endive, and especially Lettice, which last procures also Sleep, in this affect very requisite and useful. But all sharp, Salt, Bitter, Sower, Sweet, Fat, and most of all fried meats are to be avoided. § 9. *Fifthly, that for Bathing, it be done, one while with sweet, blood warm water*; another while with that which is Salt and Sulphury: for by this means, the Itch will be eased, the Pores loosned, and the Excrements evacuated and cleansed. § 10. *Sixthly, That you anoint with Oyl of Sweet Almonds, or Oyl of bitter Costus*, in either of which is put a mixture of Salt and Sulphur. Or *℞ Lupine Meal ℥iij. Sulphur ℥ij. make a Liment with Vinegar*, and anoint therewith. Or *℞ Litharge, Sulphur, Turpentine, A ℥jss. juyces of Mallows, Parietary, A ℥j. Oyl of Cinnamon*, enough to perfume; mix them, after the use of which Bath in a Blood warm Bath of Sweet Water.

IX. *Itæa, Sudamina, Papule Sutorum, Sweating, Pustules, a kind of Measles.*

§ 1. These

§ 1. These are cured by giving Bezoar Mineral, gr. vi. or x. at a time, in Tinctura Aurea, sweating, and keeping the sick very warm; and when they are fully come out, by washing with water of Oak-leaves, camphorated, or which is better first anointing them well with Pomatum, then to wash with the ablution of Saccharum Saturni, mixed with a little camphorated Spirit of Wine. § 2. This affect Rhafes and Avicen call Alef, and Alasef, or Hasef, and Alhasef, being an affect, common and familiar to Children, and young folk, especially to those of a hot Constitution, and in Summer time: they arise in the Neck, Shoulder Blades, Brest, Arms, and Thighs, but more frequently near the Privy parts and Fundament; from whence we are apt to conclude that they are a different kind of Measles from the Common. § 3. If the Disease be mild, gentle, and moderate, it may be cured by only washing with Rose, or Plantane Water, mixt with a Grain or two of Camphir. § 4. But if it be more grievous, You ought to Sweat as before directed: after evacuate the Body of Cholerick humours. § 5. Then Bath with the Lixivium Sapientie Mynsichti, and repeat it often; and after the Bath if need be, anoint either with Oleum Irinum, Unguentum ex Oxylipatho, or Schroders Balsam of Sulphur, all which you may see in our Pharmacopœa Londinensis lib. 5. cap. 1. sect. 37. cap. 2. sect. 49. cap. 3. sect. 30. cap. 4. sect. 20.

X. Αεχμήν, Impetigo, Ring-worm, or 1etter.

§ 1. These are cured by often rubbing with fasting spittle, if young and gentle. § 2. But if they be stubborn, first cleanse the body with Ext. Radii, or with our Diagallapa, then cool the Blood with Tincture of Pearl or Coral, or else taking a Dose or 2 of Pillule Panchymagoge, mingled with a few Chrystals of Tartar, then for several days together take ij. or iiij. drams at a time of the Tincture of Tartar in Aqua Cardiacæ, anointing with Oyl of Tartar per deliquium, mixed with Oyl of Wax, ana; or wash with the water distilled by a Retort out of Oleum Tartari per deliquium ℥iv. Quicksilver ℥i. which water cures all Itch, Tetter, and Ringworms, though never so contumacious. § 3. Let the Diet be neither Salt, Sharp, nor Biting; but yet of good Nutrient, and not easy to Corrupt. § 4. The Topicks (besides what we have already advised) the Liquor coming out of Green-Wood while it is Burning: Or, Juyce of Parietary, or of Sorel roots mixed with Vinegar: Or, Balsam of Tartar mixt with Oyl of Eggs and Unguentum album Camphorat. Or this. R Oyl of Wax ℥j. Oyl of Eggs ℥ss. Oyl of Tartar per deliquium ℥ij. mix them. Or this. R Ung. Citrinum ℥j. Oyl of Eggs ℥ss. Sulphur vive ℥ij. Camphir ℥j. mix them. § 5. But if it be stubborn, you must Bath with this Water. R Oyl of Tartar ℥ij. Quicksilver ℥xi. distil them by a Retort; the Mercury will come first, then

the Water which is excellent all Contumacious Lichens : to also the *Unguentum Enulatum cum Mercurio*, to anoint with, more especially if you mix with it *flos Sulphuris*, or Sulphur Vive : and not much inferiour is *foel* his experiment of the rust of Iron ; Or a weak Solution of White Vitriol in Rose water ; as also *Aqua Ophthalmica Nostra* in Our *Pharmacopœa*, lib. 5. cap. 1. *sect. 14.*

XI. *Oidnua*, Oedema, a Flegmatick white swelling.

§ 1. Purge first well with our *Diafallapa*, or which is better give two or three Doses of our *Diagamba*, and cut the rough Flegm with our *Oxyfaccarum*, by often administering of it in *Infusi Catholica*, or alone. § 2. by frictions and hot fomentations warm the place, and anoint with our *Unguentum Martiatum*, applying a resolute Plaster, or the Hyfterick Plaster ; but if it will not resolve then strive to bring it to suppuration, by applying for some days a Cataplasim of Orobis Meal and *Martiatum*, then anointing it with Oyl of Antimony mingled with Hogs-grease. § 3. Apply *Emplastrum de Meliloto*, till it breaks ; which if the skin be tough, with a sharp Instrument launce it, draw forth the Corruption, and then again with the *Emplast. de Meliloto*, cleanse and heal it as you do other Ulcers. § 4. Observe whether the Oedema follows any other Disease of the more Noble parts ; for if so, the Disease upon which it depends ought especially to be taken a-

way, otherwise the Oedema will never be cured ; yet mean season it will not be amiss to rub the part well with Oyl mingled with Salt ; Or to foment it with a decoction of Wormwood in Wine, wherein also a little Salt of Wormwood has been dissolved.

§ 5. Let the Diet be such as does not generate or breed Fluggm, but rather such as destroy it ; you may give them Fish that swim in Stoney places : Roasted Meats are better than Boyled : Cheese and moist or insipid fruits as Cucumer, Melons, &c. hurt, as also too great a quantity of Meat and Drink : Wine moderately taken, and Exercise before Meals is good ; Diurnal Sleep, Costiveness, rest and sadness are hurtful, as also Bleeding. § 6. You must evacuate the Noxious humor, sometimes by purging and sometimes by Vomiting, for which I commend our *Tractura Cathartica Magistrali* ; sometimes Sweating may also be Beneficial. § 7. In the beginning apply Repellers mixt with Discussives, but so that the Discussives may exceed, afterwards use only Discussives, as *Unguentum adstringens* mixed with equal parts of *Unguentum de Althæa* : Or *Unguentum Comitisse* : Or *Unguentum Rutaceum* ; Or *Ceratum de Ammoniaco* : Or *Ceratum Galeni* mixt with a few Flowers of Sulphur. But this is stronger than all. R *Labdanum* ℥ss. *Olibanum*, Oyl of Rue, A. ʒj. Sulphur ʒvj. Storax Calamit, Cow-dung, A. ʒss. Alum, Niter, Vine Ashes, A. ʒij. Turpentine, Pitch. A. enough to make it into a Plaster, Or

Or the *Cataplasma Resolutivum Foresti*. § 8. If it will not Resolve, but come to an Abscess, which rarely happens, you may apply this following Cataplasim. R *Althea* roots \mathfrak{z} ij. *Briony*, *Dwarf Elder*, *A.* \mathfrak{z} ij. leaves of *Sage*, *Rue*. *A.* Mj. Savin Mls. boyl them in equal parts of *Wine* and *Water*; to which add *Pulp* of *Rosted Onions*, *Basilicon minus*, *Bean Meal*, *A.* \mathfrak{z} ijss: *Cow-dung* \mathfrak{z} i. *Leven* \mathfrak{z} iss. *Ashes* of *Vines*, *Common Sal A.* \mathfrak{z} ss. *Hogs grease* \mathfrak{z} ij. *Oyl* of *Camomil* \mathfrak{z} iv. mix and make a Cataplasim. § 9. *Barbet* affirms, often to have Cured an *Oedema* with this *Wine*. R *Florentine Orrice* \mathfrak{z} j. *Sena* \mathfrak{z} vi. *Roots* of *Sea holly*, *Parlsy*, *A.* \mathfrak{z} iv. *Rheubarb*, *Agrick Trochiscated*, *A.* \mathfrak{z} iii. *Cinnamon*, seeds of *Siler Montanum*, *A.* \mathfrak{z} ij. Cloves \mathfrak{z} ss. infuse them in old *White Wine* a quart, and take every morning \mathfrak{z} iv or v. for a dose. Or with this Electuary. R *Elect.* of the juyce of *Roses* \mathfrak{z} i. *Jallap* \mathfrak{z} i. *Spirit* of *Salt* \mathfrak{z} j. mix them. of which take the quantity of a *Bean* or *Hazle Nut* every 3d or 4th day. But in using these Medicines, he rowled the parts with *Rowlers* 12 or 15 yards long, beginning from below, and going upwards, allowing thereby no liberty for the humour to descend: thus the Noble parts are strengthened, and the parts affected in few days restored.

XII. *Xoipades*, *Struma seu Scrophula*, the Kings-evil.

§ 1. Purge the body with *Dia-gimba*, *Diaturbith*, or *Diajallapa*, mixed with the *Arcanum Corallinum*, or pure *Turbith Mineral*, often repeating the Dose; now and then giving an ordinary Cly-

ster, mixed with \mathfrak{z} ii of *Scamony*. § 2. Afterwards the ashes of a *Mole* given in *Wine*, or *Decoctum Traumaticum*, with *Tincture* of *Tartar* v or vi. drops, (*à gr. x ad xx.* at a time) for several days together, perfectly cures the Disease, if there be no ulceration, anointing mean season with an Oyntment of *Pilewort*, or else of tobacco. § 3. if ulcerated the ashes of a *Salamander* sprinkled on are good, purging the body often with *Syrupus de Spina Cervi*, observing a very heating and drying Diet; or the ablution of *Mercurius dulcis* in *Lime-water*, applying a *Plaster of Basilicon*, mixed with red *Precipitate*, till the Ulcer is enough cleansed. § 4. This done, (the sick all along taking a Diet made of *Jallap*, *Rheubarb*, and *Horse-radish roots*) produce the *Cicatrize*, and after that for many weeks apply the *Emp. de Ranis*, renewing of it once a week. § 5. Let the Diet be the same as in the Cure of *Oedema* or of a *Scirrhus*. § 6. Purge with proper *Flegmagogues*, and then intermit for two or three days; in some of the Intervals whereof Sweat with the same Medicaments, and in the same manner, as we teach in the Cure of the French Pox, which is supposed by some alone to be sufficient to cure the Kings Evil. § 7. Exhibit also continually *Internal Specificks*, such as are the *Roots* of round *Birchwort*, *Bryony*, *Bawm*, *Broom Flowers* and *Ashes*; *Cypress Leaves*, *Crabs burnt*, *Dropwort*, *Devils-bit*, *Eggshells Burnt*, *Figwort*, *Flower de luce Roots*, *blew Orrice*, *Pilewort*, *Pimpernel*, *Pyrethrum*,

Pyrethrum, Rue, Squills, Savory, Sal Gem, Spunges, Vervain, &c. The Decoction of new Spunges in Ale, drunk 4 times a day; or their Ashes taken to ʒss. morning and evening in Rhenish wine, Or this, R Spunge Stone, or SeaSpunge ʒiij. Sal Gem ʒij Salt of Tartar ʒj. Salt of Pilewort ʒss. make a powder. Dose à ʒss. ad ʒj. § 8. If there be hopes of Resolution, anoint the part for 2 or 3 days with a Repercussive, as Unguentum Comicissæ or Adstringens; to ʒij. of which add Quick-silver (extinct with flos Sulphuris) ʒvj. this has many times wholly cured the Kings-Evil without any other Medicament; it may be used twice a day, but look often into the Patients mouth, lest upon the continual use of the ʒ, there should be a swelling of the Tongue and Jaws, and a Flux. § 9. After the use of the aforesaid Unguent for some days, apply Emplastrum de Ranis of Vigo, Or Mynsichs Empl. de Galbano Crocatum, both which are admirable: Or this, R Gum Carana ʒj. crude ʒ (extinct in Turpentine) ʒiij. make a Plaster: and if the Tumor be very painful add thereto Opium ʒj. § 10. If it will not Resolve, you must then come to Suppuration with such Medicines as we have expressed foregoing Sect. 1. § 5. and Sect. 2. § 5. when it is suppurated it is to be cured as a malignant Ulcer. § 11. But if the aforesaid Medicines signify nothing, you must at last come to Corrosives and the Incision Knife. § 12. After the Tumor is opened you may use this Un-

guent. R Oyl of Bays, or rather of Pilewort, Ceruse in fine powder and allayed with Aqua Vitæ, A. ʒj. Roch Allum ʒss. Salt powdered ʒij. mix them: a simple Unguent of the Roots of Pilewort also, is an incomparable good thing.

XIII. Γάγγλιον, Ludia, a Wen.

§ 1. After universal purgings, and taking the Spirit or Tincture of Tartar for several days together, if the tumour be small, strive to resolve it by applying Empl. Hystericum, vel de Ranis, anointing it often with Ballam of Sulphur. § 2. But if it will not resolve, anoint it for some days with the Oyl or Butter of Antimony, round about the roots thereof, and then with a sharp Instrument (all things being fit) cut it off according to Art, presently washing the place with the ablu- tion of Saccharum Saturni, then healing it as you do other Ulcers. § 3. One of the greatest resolvers is Emplastrum de Galbano Crocatum, and not much inferior to it is Ceratum de Ammoniaco Forresti; which see in our Pharm. lib. 5. cap. 5. sect. 4. and cap. 6. sect. 61. Oribasius made use of this. R Ceruse, Pitchy Rosin, Old Oyl, Ammoniacum, Galbanum, A. ʒj. Wax ʒiv. mix them. Some put to the Composition unslaked Lime, others Sulphur Vive, others Sagapenum; and some put all of them. § 4. If the Wen will not resolve with the former things Sennerius advises to suppurate it, which you may do with the things taught in some of the former Sections. § 5. If you design to take it away by Section, the manner is this: first make

a small Wound in the skin, even unto the *Cistis* or Bladder, where in the matter of the Tumor is included, through which a Probe of the thickness of a Finger, round at the end but hollow in the midst, is to be conveyed in between the Skin and the *Cistis*, and to be drawn about even to the root of the *Ganglion*: and then after this (upon it) the skin is to have an Incision made therein deep enough, in the form of the Letter X, and from the corner it is to be drawn along towards the Root. § 6. If there arises any Hemorrhage from the thicker Vessels upon their being cut about the root, it is in a fit and convenient manner to be stanch'd and stop't: and then upon this, the whole Tumor, (together with the Membrane) is to be extracted and drawn forth, and no part thereof to be left remaining behind: or if by chance there should be any of it left, it is then to be Consumed with Caustick Medicaments. § 7. Callous and bony Nodi are hardly cured (as *Platerus* thinks) and not at all if they be inveterate and hardned: such as are cureable, are to be done with the Emollients and Resolvents before named. § 8. In the Curing of Nodes and Tophi, chiefly where they are the Symptoms of the Pox, *Barbet* advises to these things. R Oyls of Venice Turpentine, of Euphorbium, of Guaiacum distilled, A. Zij. crude Opium ʒss mix them. Or R Mastich, Olibanum, A. Zij. Labdanum ʒiv. crude Antimony ʒiiij. Opium ʒj. Venice Turpentine enough to

make it into a Plaister. Or, R Juyces of Housteek, Henbane, Celandine, A. ʒj. Mans grease, ʒiiij. Oyls of White Lillys, Camomil, A. ʒij. boyl them to the Consumption of the juyces: then add ʒ sublimat^d Div. Venice Sope ʒij. Crud ʒ. ʒiiij. Mummy, Opium, A. ʒj. Labdanum, Wax, A. enough to make a Plaister. 9. You must also note, that neither Wens nor Nodes that consist in the Joynts, chiefly the Knees, or neer the Juglar Veins are to be cut, for fear that (in the one) the Nervous parts that lye underneath should be hurt, and so the motion of the Member quite taken away: Or, (in the other) that a violent Hemorrhage or flux of Blood should follow. Those are only fit for Section which are in the head, forehead, and other places without the Joynts. § 10. But those Nodes which tend towards the Joynts (thereby hindering their motion) and have their abode in those places which are naked and only covered with skin, the skin is then to be opened, and with a sharp Iron Instrument, the Nodus (by a continued stroke) is to be cut away from the Bone, and the Wound is then to be cured after the manner of other Green Wounds. § 11. Lastly, it is to be noted that many Wens have been cured by barely binding hard over it a plate of Lead besmeared with Quick-silver. § 12. If the Wen yield neither to Repercussives, Discussives nor Suppuratives, with due abstinence or fasting, It is the Opinion of *Barbet* to use an Actual Caутery, by

by the use of which the Tumor may not only be staid for a long time, but sometimes the Disease may be wholly eradicated: if the flesh begins to grow again, it ought to be extirpated with a Knife or with a Thread.

§ 13. *If you do it with a Thread*, it ought to be small and strong, twice wound about the Neck of the Tumour, and tyed with a double knot, which must be straightned the same day, and so every day till the Tumor be deprived of its colour, sense and life, which will be in about 7 or 8 days: then it is to be taken off with a crooked Knife, which will be easy to do, since neither much pain, nor a flux of Blood is to be feared: if the Thread be wet in Mercurial or Arsenical water, it hastens the Mortification of the Tumor. This Operation is only to be done in a Phlegmatick body, in others it causes great pain and Inflammation.

XIV. *Scirrhus*, a hard melancholy Tumor.

§ 1. *Let there be a perpetual diet and purging for many Weeks of the stubborn melancholly humour*, by purging with *Lapis Lazuli* mixed with *Extractum Rudi* every morning; taking every night going to bed gr. xv. or xx. of the Extract of black Hellebor, mixed with Salt of Tartar, drinking every day a Diet made of the juyce of Borrage and Bugloss.

§ 2. *Then apply outwardly a Cataplasm of Briony roots, Goats dung, and Urine, for certain days*; if it suppurates, wash it with the ablu-
tion of *Mercurius dulcis* in

water, applying thereupon the Magnetick Emplaster, giving the Extract of Hellebore, with *q̄ dulcis* xvi. and *q̄ vitæ* gr. ij. beating them well together. § 3. If pain be great, (which is very seldom) then apply Capers, in form of a Plaster, or our *Emplastrum Arthriticum*, and it will soon vanish. § 4. *Let the Diet be opposite to the humour abounding, and easy of Digestion*: all sharp things, and such as greatly heat and dry, especially being hot in the third and fourth Degree hurt, those things which generate thick Blood, are carefully to be avoided, and those things are to be chosen which are of a humid nature. § 5. *The humors whether Flegmatick or Melancholick, are to be evacuated by fit Medicaments*, which you may find out in their proper places. § 6. Sweating also (as well as Purging) is of great force: Bleeding cannot be used without apparent Detriment. § 7. *The containing cause or matter making the Scirrhus is next to be considered, and to be taken away*, not by Repercussives or Repellers, for they hurt; nor, by reason the matter is cold and thick will it give way unto them, but rather be the more incrassated and thickned, and as it were impacted and made to stick the faster in that part. § 8. *In this Case therefore most convenient are Emollients* (to soften the hardened matter) and afterwards Discussives to scatter it, when it is softened. The Emollients ought to be meanly hot, and temperate in respect of moisture or dryness:

ness: among which are the Oyls of sweet Almonds, Camomil and White Lillies; Butter, Hens, Geese, Ducks, Hogs, Foxes and Mans Grease; Marrow of Veal and of a Hart; Mucilages of the Roots and Leaves of Mallows, Marsh-mallows, Line and Fænugreek Seed, Orach, Wax, fat Figs; and stronger than these are Old Oyl, Bears Fat, Bdellium, Liquid Storax, Tar, Ammoniacum, Galbanum, fat Rosins; Oyntment of Marsh Mallows, *Diachylon*, Plaster of Mucilages and of Melilot.

§ 9. As for Resolvents or Discus-sives you have them at Sect. 1. § 5. and Sect. 2. § 5. *aforegoing*. But Emplastr. de Galbano Crocatum; or *Forrestus* his Cerat of Ammoniacum: Or, Empl. de Mastiche prius: Or Oxycroceum, (in *Our Pharm. lib. 5. cap. 5. sect. 4. cap. 6. sect. 41. 57. 62.*) may supply all the rest. Barbet has this Cataplasim. R̄ *Althea* Roots, ℥iij. Orrice ℥j. Leaves of Cole-worts, Parietary, Mallows, flowers of Camomil, Mellilot. A. M. j. Linseed ℥ij. boyl them in Water then beat them well together, and add Horse-dung ℥ij. Hogs Grease, Oyl of Camomil, A. ℥j. Rosted Onion ℥ss. mix and apply them. Also the Cataplasim of Briony roots, Goats Dung and Urine is very excellent. § 10. But *Sen-nertus* advises, first in a Schirrhus that is but newly begun, to use those Medicaments that are of the milder sort: but in an old and inveterate Schirrous, or if it be in a Tendon or Ligament those that are more strong. § 11. Secondly, That you manage your Medicins

with Care and Caution; not to use those things which do too much discuss or Resolve, lest the Schirrus should pass into a stony hardness: nor those which do too much mollify, lest it should degenerate into Cancer. Wherefore it will be most safe to let the whole course of the Cure be mixt; and that you use not alone any Medicament, that hath in it a power either only to dry, or only to moisten, but such as mollify and discuss, not together but by turns, and one after the other: Or, otherwise, that we mingle together Emollients with Digestives: for which purpose *Galen* commends the fomentation of Vinegar, wherein the Stone Pyrites has been extinguished, the part being first fomented with a Decoction of the Emollient Herbs: which alternately let be often repeated. And in this manner the Schirrus which is almost desperate may be cured. § 12. Thirdly, That if the former Method be too tedious, let the Medicaments be all mixed together, for by this means the Tumor will be both softened and dissipated together: for which purpose you may apply this. R̄ fresh Butter, Scammony, Wax, A. q. s. mix them. Or this, R̄ Cerat de Ammoniaco *Foresti* ℥j ss. Sulphur vive ℥iij. mix them. § 13. Suppuratives seldom prove well in this Disease; but Section and Burning are worse, except the Tumor be in a proper Cistis, and then the Name of Schirrus is improper: If it suppurates, cleanse it with *Diachylon simplex*, but avoid Lancing, lest it turn to a Cancer.

XV. *Kagniv* Cancer, a Crab-like Tumor. § 1. *If it is in a woman whose Terms are stop'd, cause them to return, and by purging and cleansing Medicines remove the defect.* § 2. *If it be ulcerated, then Auxiliaries are of no force; the Purges at the Sect. 14.* § 1. are good in this case: very excellent also is the Spirit and Tincture of Tartar, as also the Magistery of Pearl, Crabs Eyes and Claws. § 3. *It will be good to anoint it round with Oyl of Antimony, and if the Cancer be great to cut it off to the quick, Or by burning with actual or potential cauteries to remove it; Or first wash it with water of Soot, till an Escar be made, then apply Oyl of fixed Arsenick (washed in water) till the Ulcer be thoroughly cleansed; Or else strew on a Precipitate made with Amalgamated Sol, then use the Incarnative powder; and lastly, heal it with the Litharge Oynment.* § 4. *When the Cancer is mortified and Ulcer cleansed, you may use the Balsam of Sulphur, and Diasulphur Emplaster, and during the whole cure let them use a Dyet of Sena Epithimum, and Polipodium, in Whey or White-wine, eating often Barly-Broth and other restoring things.* § 5. *I once cured a Cancer ulcerated with Hartmans blessed Powder, thus: making the Ulcer clean, and wiping of it, I strewed the Powder thereon thick, and with oyled Cloth moistned with fasting spittle (that it might stick) I covered it, this procured (as he also saith) great pain, but it was not removed till it eradicated the Cancer*

and its roots; (neither indeed ought it either to be removed, or a new one to be put on) anointing it round about with Oyl of Roses; when the pain ceased, and the Cancer was eradicated, I perfected the Cure with the Incarnative Powder and Litharge Oyl. But this observe, that if any of the Roots of the Cancer yet remain, you still apply the blessed Powder, till they are all destroyed. § 6. *Hartman saith, he hath cured many womens Breasts ulcerated, only with a plaister of Amoniacum dissolved in Vinegar, and often repeating of the same to a perfect Cure.* § 7. *Let the sick observe the same Diet as in a Schirrhus, with frequent and convenient purging; but bleeding and scarification is evil; in women provoke the Terms; and in men the Hemorrhoids, where they have been accustomed.* § 8. *Externally also suppuratives and strong discutients are naught, but these following are good; Roots of Aron, Dropwort, Figwort, Mullein Leaves of Maiden-hair, Housleek, Agrimony, Tobacco, Plantane, Night-shade, Hounds-tongue, Spawn of Frogs, of Whales, burnt Crabs, burnt Lead, Mans Dung, Emplaisters of Diapompholigos, of Lead, of Frogs, with ☿. Diasulphuris, sugar of Saturn, Camphir, &c.* § 9. *In a Cancer not Ulcerated, first let the Diet be moistning and cooling; and let the Body be purged with Extract of Hellebor, Pills of Lapis Lazuli, Confectio Hamech, Tincture of Sena, &c. after the Body has been first prepared 8 or 10 days with*

with Fumitory, Hops, juyce of fragrant Apples, &c. and let the sick abstain from all things that are thick, fæculent, salt, bitter, and such are old Chese, flesh that is thick, old, salt, smoak-dried, Garlick, Onions, Mustard, Pepper, and all other Spices: let them also avoid grief, sadness, watching, and the like. *Dyer made of Barly, Lettice, Mallows, Borrage, Succory, the 4 cold Seeds, Veal, Wether Mutton, Kidsflesh, Chickens, rere Eggs, River fish, Whey of Goats Milk, and such like is good.* § 10. Secondly, let the asorenamed Purges be often repeated, and by turns, for the Humor may not at once and altogether be evacuated. § 11. Thirdly, You must apply convenient Topicks, such as may gently Repercuss, Discuss, and corroborate the part; for which purpose you may use this. *R. Juices of Plantane, Endive, Housleek, Nightshade, Rose Vinegar, Oyl of Myrtles, A. ʒj. Venice Turpentine, ʒij. Stirr them together in a leaden Mortar, with a leaden Pestle, adding rinds of Pomgranates and Citrons, Saccharum h. A. ʒj. fine Bole, burnt Lead, Camphir, A ʒ ss. mix and make a Linement.* Or the Juices of Nightshade, Endive and Succory; Or rather Cockle fish boyled: Or River Crabs, Crevishes: Or, chiefly green Frogs, out of which a most excellent Oyl is to be distilled by descent, for the easing of the Pain, and healing of the Cancer. See it in our Doron, Lib. 3. Cap. 2. Sect. 1. § 12. Some make an Unguent with the Ashes of Crabs or Craw-fish, mingled to-

gether with Coriander seed, and Oyl of Roses, as also of Metalytics, washed and freed from any biting quality, as Lead, Tutia, Pompholyx, Litharge, Ceruse, Antimony; but Lead is most highly commended by all, and may be used any manner of way: *R. Terra sigillata, fine Bole, Ceruse, A ʒ ss. Tutia prepared, poulder of green Frogs A. ʒ iij. Litharge. ʒj ss. Oyl of Roses ʒj ss. Oyl of Frogs ʒj. Vinegar ʒvj. Wax q. s. in a leaden Mortar, make an Unguent, which apply.* § 13. If the Cancer be ulcerated, you must apply a Cure, either perfect or Palliative: The perfect Cure is done by cutting off and searing or burning, if it be in those parts where it may be done without danger. It must be cut away by the roots, thus: The part affected being held by a pair of Forceps, is to be cut off by the help of a fit Knife, close by the very roots, so that nothing be left behind, least it should bud afresh: some hold it only with their left hand: others pass a string through it twice crosswaies, and holding by the ends take it off by Incision. The Incision being done, the thicker Blood is to be squeezed forth every where, and then the place to be seared and burnt with an Actual Cautery, that thereby the Reliques (if any be) may be consumed, and then the affect is to be healed as a common Wound or Ulcer: yet some stop the flux of Blood without the Actual Cautery, by drying Pouders, Linaments. § 14. In this case also those Medicines asorenamed at § 9. which purge Attribilis are often to be

be repeated: moreover Venice Treacle and Mithredate may be used as Antidotes: together with the Cautions and Diet before prescribed. § 15. *The Palliative Cure, is that which only hinders the farther Augmentation and eases the pain, that so the sick may lengthen out, and lead the remainder of his life with the less Torment and Misery: in order to which, you may anoint with the Unguent afore described at § 12. and apply over it either an Emplaister of Ammoniacum, Or Ceratum de Ammoniaco Forresti, Or Empl. de Galbano Crocaturum, Or lastly Empl. de Raniscum Mercurio.* § 16. *Barbet has the Cancer of a Bone, wherein Incision is necessary, made according to the length of the Part, to the Bone it self; to which forthwith apply those things which correct putrefaction, as Euphorbium and its Tincture in Rectified S.V. Spirit of Vitriol mixt with S.V. &c. The powder of Turpentine hardned by boyling is an Experienced thing, being mixed with Unguentum Fuscum Wurtzij, or Ægyptiacum: An actual Cautery is also very convenient. And you will accelerate the Cure, if instead of Tents made of Lint, you use Elder Pith, which will imbibe the sharp and thin humors. Now that the Disease may not return nor break out in new places, give the Patient this Apozeme. R Roots of Comfrey, Osmund Royal, China, Sarsaparilla, A. ʒj. Guajacum Bark ʒij. Rhubarb ʒvj. Sena ʒx. Agrick ʒvj. Cinnamon ʒij. Cloves ʒj. infuse in Barly Water five pints or*

more: boyl with a gentle Fire to two quarts; then strain and sweeten with Syrupus Symplicis Fernelij ʒiiij. Dose ʒiiij or v. It purges gently, forwards the Cure, and preserves from farther danger.

XVI. *ſc̄a Scabies, Scabs or Scabbiness.*

§ 1. *Purge with Panchymagogen Vegetable, mingled with ʒ dulcis, or Arcanum Corallinum; and let them drink Clarified Whey: § 2. This done, cleanse the Body, by often taking Spirit or Tincture of Tartar; cool and sweeten the Blood with Magistery or Tincture of Corals or Pearl: § 3. Then provoke sweat with spirit of Danewort, Guajacum, Antimonium, Diaphoreticum, &c. § 4. And then outwardly anointing either with Mercurial Oyntments, or the ablation of ʒ dulcis in Lime Water, &c. with Pomatum, the Cure will be perfected. § 5. If it be the moist Scab it is more easily Cured than the dry Scab; First by Evacuation with Epithymum, Polypodie, Sena, whey of Goats milk, and juyces of Roses and Fumitory: Secondly, by provoking Sweat by § 3. or thus: R Spirit of Danewort ʒ ss. Fumitory water ʒij ss. mix them: Thirdly by Baths of Sweet water, Sulphury baths, and Baths with Vinegar with the middle bark of Frangula. With these Baths and Whey alone (saith Senertus) even the most contumacious Scabies is often Cured. § 6. Examples of these mineral Baths, Senertus has many, of which take these. R Alum ʒjss. Sulphur ʒij, Niter ʒj. Salt an handful; all being*

in pouaer, cast it into a Kettle full of water warmed: Or R^e Salt ffs. Alum \mathfrak{z} ij. Vitrio. \mathfrak{z} iiij. Tartar, Niter, A. \mathfrak{z} ij. being in a powder, cast them into a Bath of Water. In these Baths you may beforehand boyl Cammomil, Fennel, Featherfew, Savory, Time, Mal-lows, Fumitory, Scabious, Mugwort, Beet, Roots of Sorrel, Elecampane, Briony: after these are boyled and the Minerals put in; add Meal of Lupins, Orobus, and Beans, Wheat Bran, &c. § 7. Outwardly we commend anointing with these Unguents, viz. Enulatum, ex Oxylapatho, Valencia Scabiose: but if the Humour be confirmed and settled, you must use stronger; as, Unguentum Enulatum cum Mercurio (in our Pharmac. lib. 5. cap. 4. sect. 14). Or this: R^e Flowers of Sulphur \mathfrak{z} ss. Niter \mathfrak{z} ij. juyce of Limons \mathfrak{z} ij. Oyl of Roses and Nuts of each \mathfrak{z} j. mix them. Or this, R^e Roots of Elecampane, Sorrel, A. \mathfrak{z} j. boyl them in Vinegar and pulp them, to which add Sulphur Vive \mathfrak{z} j. Salt \mathfrak{z} ss. juyce of Lemons \mathfrak{z} vj. white Unguent of Rhasis; Citrin unguent, A. \mathfrak{z} ss. Oyl of Roses and Oyl of Tartar, Ana. enough to make an unguent, adding a little Wax. But by the leave of Sennertus, the Oyl of Tartar will be inimical to the juyce of Limons; Alcalies ought to be used by themselves, and Acids by themselves. He proposes this as an Experienced Remedy: R^e Roots of sour Sorrel and of Elecampane, (both green) ffs. Hogs grease \mathfrak{z} ij. bruise them well in a mortar, and boyl them a little over a gentle Fire; then press them hard out, and

make an Oyntment. § 8 If it be the dry Scab, wherein little or nothing is voided; It is cured with much greater difficulty, but after the manner of the former; wherein also you must use stronger purges, as Sena, Confectio Hamech, Extract of black Hellebor, &c. § 9. Hitherto of the Scab simply considered; but there are several species of it, which require their several and particular ways of Curation, too long to be related here: But because we are unwilling to deprive the young Student of the knowledge thereof; we shall lay down in the first Appendix at the end of this Chapter, their particular Theory, at least of the principal kinds; as of the Volatica, Porrigo, Vars, Sirones, Phlyctana, Ephelides, Psodracia, Malum-mortuum, Epiniethides, Tinea and Perniones, of all which in the said place, we shall Treat in order.

XVII. - Ἐλεφαντίασις, Lepra; the Leprosie.

§ 1. That which hath real vertue to extirpate this Disease, is the true Aurum Potabile: and not much inferior is the Tinctures of Antimony or Coral; but if the Aurum Potabile be wanting, then the Vitriolate Tartar, Tincture of Tartar, and \mathfrak{z} dulcis take place: a specifick in this case is Vitriol \mathfrak{z} ij. dissolved in Wine ffs x. and strained, of which give three or four spoonfuls often in a day with ordinary drink, or with Wine, which is better; ffsj. of Vitriol will be enough to effect the Cure, being continually taken for 3 or 4 weeks. § 2. It may also provoke sweating, bath-

ing first the whole Body in Spirit of Wine, and then) with the Diaphoretick, or rather Tincture of Antimony, so will the Scabs and Scurff fall away; the remaining roughness and hardness mollify with Baths made of Emollient Herbs; but it is absolutely smoothed and softened by anointing with Oyl of Vipers, or Land-Snakes. §. 3. *Let their Drink be Viper or Snake wine, and let them often eat their Flesh, purging also the body with the Panchy-vegetable, mixed with §. dulcis; and Extract of black Hellebore, mixed with Colocynthis and Salt of Tartar, or which is better our Pilula Panchymagoe.* §. 4. *The Leprosy of the Greeks, is a certain high and indeed highest Degree of Psora or Scabies; It comes from the Greek word Lepis, in Latine Squama, from the Scales of Fishes.* §. 5. *This is that which the Arabians call Albaram Nigram, the black Albaras, which is a scabiness happening unto the skin, rough, vehement and making Scales, like to Scales of Fishes, with an Itching, and it is accompanied with a melancholy Humor, being a Scabious in the highest Degree, and differing only from Scabies in the vehemency of the Affect.* §. 6. *In Scabies there falls off only certain Bran-like substances: but in Lepra, that which falls off is like to Scales of Fishes, and this whether the sick scratches or not; the other Signs see in lib. I. cap. 48. sect. 28.* §. 7. *The Cure of this Leprosy we have laid down in part at §. I. 2. 3. foregoing.* And seeing that Lepra is a Scabi-

es in the highest Degree, it requires the same Medicaments that Scabies doth (which you may see at Sect. 16. §. 1. 2. 3. 4. 5. 6. 7. 8.) only they must be somewhat stronger. §. 8. *Wherefore a good Dyet being instituted, the body is to be evacuated, and the Liver to be corrected and corroborated; and the matter invading the skin, to be by digestives and abstersives taken away.* §. 9. *You may provoke sweat by decoction of Sarza, or Guajacum, or Quintessence or spirit thereof: and Sulphur is here also very commodious, by reason of its absterfive vertue.* §. 10. *Hierbo of the method of cure of Lepra Græcorum; it remains now, that we shew the several Species or kinds of the Leprosy, and into how many differences or degrees each is subdivided; because that in lib. I. cap. 48. sect. 28. we there too slightly pass'd these things over; not thinking then to handle them so largely and compleatly as we now intend to do.* §. 11. *The Leprosy is threefold, First, Lepra Græcorum, which is that of which we have already Treated in this place: Secondly Elephantiasis Græcorum, which is Lepra Arabum: Thirdly, Elephantiasis Arabum.* §. 12. *The Leprosy of the Greeks hath several Degrees of Putrefaction: First Lepra Græcorum, which we have but just now handled, which is the highest Degree thereof: Secondly Leuca or Leuce: Thirdly, Alabastrum or Morpha: Fourthly Mentagria a kind of Impetigo Agria, which is a Leprous Ulcer of the Chin.* §. 13. *The Elephantiasis*

of the Greeks, which is the *Leprosy* of the *Arabians*, has also four degrees of Putrefaction: First The *Elephantiasis* it self, which is the highest Degree: Secondly, *Alopecia*: Thirdly, *Ophryasis*: Fourthly, *Leonina*, or the Tetar. § 14. The *Elephantiasis* of the *Arabians* is another kind of *Leprosy*, differing from the former, a single affect without Degrees, and commonly hapning to the Feet: concerning all which, we shall (God willing) largely Treat in particular in the second Appendix, at the latter end of this Chapter.

XVIII. *Θύμον*, *Verruca*, a Wart.

§ 1. Purge the Body with Pill. Rudii, mixed with $\frac{1}{2}$ dulcis, then touch the Warts three or four times with either Oyl of Vitriol or Sulphur, or butter of Antimony. or wash them with water which comes out of the ends of Oak sticks when burning: or wash them with Spurge Milk, or apply to them an Onion beaten with Salt. § 2. Fallopius commends the juyce of the leaves of the Willow or Sallow Tree: Or, if the juyce cannot be had, their Powder mixed with Vinegar of Squills. So also Figwort; Or the Roots of water Dragons; Or Aron and Sow-bread; Or the fresh roots of Celandine with the yellow Juyce thereof, to appoint with and apply: applying after a Cataplasim of Water cresses and Mustard: Or, to rub them with Night shade and Urine, washing them afterwards with juyce of Mullein; Or a Decoction of Mustard, Salt, and Sulphur with Vinegar. The rubbing of them often also with a

dead mans hand, is said to be of great force. The leaves of Savin macerated 24 hours in Wine and applyed are good. So is a Cataplasim of Herb Robert, Rue, and Yarrow beaten together and applyed; and *Cichorium Verrucarium* or Wart wort, is of Singular use and benefit, as also the milky juyce of Dandelion, and of all other Endive and Succory-like plants: Or the water sweating out of Vine Branches while burning; Or, the standing water on the Stumps of Felled Oaks: Or the meal of chick-pease. But above all is commended juyce of Purslane. § 3. For compound medecines, the Emplast. de ranis cum $\frac{1}{2}$ is very good; Or this, commended by Sennertus: \mathcal{R} Ship puch \mathfrak{zj} . Galbanum dissolved in Vinegar \mathfrak{zjss} . Sal. Armon. \mathfrak{zj} . Diachylum Magnum \mathfrak{zjss} . mix and make an Emplaster. § 4. If these will not do, you must apply your selves to Cautericks, which yet notwithstanding are not to be used without a great deal of caution, especially in nervous places, and only by touching the Wart with them; the part about being first well guarded with Wax or some kind of Emplaster: For this purpose, the milk of Fig-tree or Spurge, or Tithymale alone, are very efficacious, and so found by Experience. You may also use unslaked Lime mixed with Soap, which will be yet more effectual, if a little calcined Vitriol or Verdigrise, or a cautery of Soap Ashes be added. Or \mathcal{R} The white of an Egg hardned, Verdigrise, Allum. A. \mathfrak{zj} . mix them.

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Or make a Cataplasme of green Garlick, and apply it. Or, R^e Orpiment, mixt it with Oxy-mel or juyce of Spurge, and put it upon the Wart, with a defensive. *Andreas à Cruce* much commends the Oyl of Vitriol, nor is that of Sulphur behind it. § 5. But if you like not these Potential Cauteries, you must apply your selves to the Actual, or else to cutting. You may Actually burn them, either by a little stick of the Beech Tree, lighted at one end; Or by an Iron Bodkin heated red hot; and applyed through a Silver or Brass pipe, that the adjacent parts may not be hurt. Or apply a thin Plate of Iron, having a hole bored through it, so far as the Wart only may appear through the hole, and then burn it either with a red hot Iron, or the flame of a candle. § 6. Lastly the burning being ended, the Scar is then to be taken away; and the affect to be healed after the manner of other Ulcers.

XIX. *Hæc, Clavus a Corn.*

§ 1. What we have spoken at the 18. Sect. may be understood here; besides which you may anoint the Corns with Oyl of \varnothing , or the Blood of an Eel often: § 2. Ocure them, and wash them with Dogs-urine, applying a plaster of soft red wax, mixed with \varnothing dulcis, or a plaster made of Galbanum, Ammoniacum, and Turpentine dissolved in Vinegar: or this commended by *Rulandus*, R^e Oyl of Sulphur per camp. \mathfrak{z} ss. corrosive Salt of Cristal stone \mathfrak{z} ij. seeds of Henbane, Opium, \mathfrak{a} . \mathfrak{z} j. grind and mix them, this plucks

them up by the Roots. § 3. Or you may apply in particular, the Emplaster afore-described at Sect. 18. § 3. which is commended in particular by *Sennertius*. § 4. If none of these things will do, but you must be forced to come to cutting: You must first soak the Feet or part where the Corn is, in warm water; then cut it so as you may see it, after with the point of a sharp Pen Knife, dig it round the edges, so as you may tie a twine thread gently about it; this done, you may hold up the Wart by the Thread, till you so dig round about it, as absolutely to cut it out; this done, fill the place, or apply over it Empl. de Ranis cum Mercurio, or Forest his cerat of Ammoniacum.

XX. *Phylæne oculorum*, Blisters of the Eyes: § 1. In the Cure hereof, you must resolve the matter conjoynd and revert the Antecedent Cause, taking great heed that you bring not the Pustles to suppuration, least they should turn into Ulcers. Therefore those Evacuations Revulsions and Derivations, which we shall hereafter use in the Cure of an Ophthalmy must be used here. § 2. If they be with Inflammation, they must be cured as other Inflammations; for which purpose Sacharum dissolved in Eye-bright or Fennel water, is here of all Remedies the chiefeſt. § 3. If they be from a waterish Humour, you must exsiccate and dry, which you may do with Lapis Tutia, Calaminaris, and such like. § 4. Afterwards you must apply such Topicks, which may gently Repercuss and Dis-

cus, such as we shall hereafter lay down in an *Ophthalmia*: Then such things as are more dissolving and drying, and especially *Ophthalmick Ointments*, which discuss and dry up Pustles. § 5. Those which are superficial, and appear of a darker color, are called in Greek *Epicaumata*: Those which are more deep, under the second or third Film, which seem white by reason of the whiteness of the *Cornea*, are called *Encaumata*; these are more dangerous, and do often eat through the whole *Cornea Tunicle*. § 6. Barbet saith, that these *Phlyctænæ* are easily cured by this Powder. R White Sugar-Candy, prepared Tutty A. ʒss. Red Coral prepared, Camphir, White Vitriol, Saccharum Saturni A. ʒij. mix and make a fine powder.

XXI. *Anchylops*, a Tumor in the Great corner of the Eye.

§ 1. In the beginning of the Tumor you must repel the deflusion from the part, use Repercussives to the Forehead, and purge with proper Catharticks; to which purpose you may apply *Ceratum Santalinum*, or that *pro Herniosis* (in our Pharm. lib. 5. cap. 5. sect. 3. 10.) or this of Riverius. R Pomgranate peels, Acacia, Ballastini, Galls, Cypress Nuts, Roch Alum, Fine Bole A. ʒj. white Wax ʒiij. Turpentine ʒiij. make a Cerume. § 2. After the use of Repercussives, apply Resolvers to the part affected, such as *Liquor Ophthalmicus* (in our Pharm. lib. 4. cap. 1. sect. 22.) or this Decoction. R Honey, Fine Aloes, A. ʒj. Myrrh ʒs. Saffron ʒj. Water lbij. boyl

gently to the consumption of a third part, with a Sponge squeeze it into the Eye, and apply the Sponge warm to the part, binding it on: after which you may apply the *Ceratum Capitale Horstij*. § 3. If the Tumor will not resolve but come to suppuration, whereby it becomes *Agylops*; you must forward the maturation with simple *Diachylon*: or if there be pain or inflammation, you may apply a Cataplasm of Crums of Bread. § 4. If it will not break you must open it with a Lancer, without delay, least the contained matter should corrode the parts, and make an incurable *Fistula*. Some open it with the hot Iron, but the Cold is best. § 5. After the Apopteme is opened, you must cleanse it, and heal it as you do other Ulcers. If it degenerates into *Fistula Lacrymalis*, you must cure it as we shall direct in its proper place: you may use this to cleanse. R Myrrh ʒj. Aloes ʒj. Sugar Candy ʒiij. yolks of Eggs N^o. iij. Goats Milk ʒix. mix them. And this to heal. R R-d Coral prepared, Harts-Horn burnt, Sarcocol, burnt Lead, A. ʒj. Sanguis Draconis, Crocus Metallorum A. ʒss. white Starch ʒss. Gum Tragacanth ʒj. dissolved in Rose water: mix all with Horse-tail Water q. s. and make a Collyrium.

XXII *Parotis*, *Parotis*, a Bubo behind the Ear.

§ 1. If the Parotis be critical, thereby terminating a Disease, or at least diminishing of it, than the whole work is to be committed to Nature, as Hippocrates adviseth, Lib. 1. Aph. 20. Nothing then is to be don. but only those

things which ease pain be laid thereupon, the which may at one and the same time help forward the maturation. § 2. In all kinds of Parotides whether Critical or Symptomatical, Benign or Malign, it is to be noted, that no Repercussives, Repellers, or drivers back, have place in any measure, least that the matter be driven from the exterior to the interior, and from the more Ignoble to the more Noble parts. § 3. If the Tumor hastens not fast enough it self to come forth, but that nature is weak, you ought to apply the gentler sort of Attractives, such are the Oyls of Camomil, Flower-de-luce, Dill, Melilot, &c. not using the stronger, but with caution, least the pain should be encreased. § 4. If nature inclines to resolution, you must assist her with Discussives: but if to suppuration (which is much better) then with Medicines which concoct, digest and mature, all which we have proposed Sect. I. II. in the Cure of Phlegmon and Bubo. § 5. The Apostem being suppurated, it must be opened (as we in its proper place do teach) and to be cured after the manner of other Ulcers. § 6. If it be symptomatical, and Nature be weak, Or there be an over-great abundance of the Antecedent Cause, it is to be lessened by evacuation: for where such plenty of vitious humors are, it is not to be feared that Nature hereby may be averted from, and hindered in her work of Expulsion; but rather to expect, that being eased of some part of her burthen, she will the more easily afterwards expel what remains,

and ought to be emptied forth. § 7. But yet, if notwithstanding this Evacuation, whether Emessick, Cathartick, Sudorifick, or Ptar-mick, Nature cannot sufficiently expel, than the expulsion is to be forwarded by Cupping Glasses and other Attractives. § 8. And hence it is, that either a discussion, or (which is better, and most practised) a suppuration is to be procured, by those Medicines which we have proposed Sect. I. and II. aforecited. But here you must observe the condition of the Tumor, for if it be more than ordinary cold and thick, you must use the hotter and stronger discussives; and if there be any cause to fear that the matter may be hardened, you must make use also of Emollients. § 9. The matter being softened and matured, if it so tends, let the Apostem be opened and cured as we advise at § 5. Now you must not expect that the Tumor should break of its own accord, nor are you to wait till then, least the Pus being long retained produce many sad and dangerous Symptoms, and (as Gulielmus Fabricius, Cen. 2. Observ. 39. well notes) seeks another passage, whereby it may cost the Patients their Lives. § 10. The other kinds of Bubo's, as Phyma and Phygethlon, have almost the same Intentions of Cure; and therefore we refer you to the aforecited method of Parotis in particular, and to the cure of the Bubo at Sect. II. in general; only observe: § 11. First, that a Bubo is either Critical or Symptomatical: the Critical happens to-wards

wards the end of a Disease.

§ 12. The Symptomatical is either Benign, Venereal, or Pustulent. And in all these cases, that which happens in the Groin is great, painful, and proceeds of putrefied blood, is simply and specially called Bubo. § 13. But if it be little, not painful, arising in the Groin, and from a mixture of Flegm and easily ripened, whether in the Groin, or in any other of the Glandules; it is a Phlegmone Oedematodes, whose proper name is Phyma. § 14. But if it be greater, more painful, arising from a mixture of Choller, and hapning in the Capital or Thoracical Glandules it is a Phlegmone Erysipelatodes, or Phygethlon: which behind the Eares is called Parotis; under the Arm-pits Panus; and in the Amygdalae, more properly by the general name Phygethlon. See lib. 1. cap. 48. sect. 13.

XXIII. Polypus, noli me tangere, An Excrecence of the Nostrills.

§ 1. The Cure is performed either by Medecines or by Instrument: at first such things as are dry and astringent are most convenient; as Pulvis ad Casum, de Gemmis Frigidi, but especially the Pulvis dysentericus (in our Pharm. lib. 4. cap. 21. sect. 42. 45. and 75.) or Pulvis Astringens in Our Doron lib. 2. cap. 21. sect. § 2. If the former things will do nothing you must apply such things as will eat, as, R Burnt Alum, Fine Bole, Balauftians A. 3ij. make a powder. Or this, which is stronger: R Vitriol 3ss. Allum, Pomgrate-rinds, Galls, A. 3ij. Red Myrrh,

burnt Birthwort, A. 3j. make a Powder. Or this, which is yet stronger. R Vitriol 3iiij. Alum, Verdigrise, A. 3ss. Vinegar 3vj. calcine in a Luted Vessel. Another which is stronger. R Red and Yellow Arsenick, Alum, Galls, A. 3ss. make a fine powder: to these add Pulvis Catharticus Clossii (in our Pharm. Lond.) and the pulvis Causticus Barbetti in our Doron lib. 2. cap. 21. sect. following. And some have been perfectly cured with the Liquor Mercurij Sublimati (in our Pharm. lib. 4. cap. 11. sect. 24) but in this case it will be good to make the water with three or four fold quantity of Mercury. § 3. But before any external Medicine is applied, General and Universal Medicaments ought to be premised, in the new of the Moon, such as are commonly exhibited in a Scirrhus, or a Cancer, if there be fear of its degenerating. § 4. Afterwards, and during the time of these exhibitions, you may pursue the former Method at § 1. and 2. Or, you may apply to the part affected Oyls of Vitriol and Sulphur uncorrected, and dropt into Wool, after the Flesh has been scarified; or else Tents of Gentian Root; Or Lapis Medicamentosus Crollij: Or the afore-said Pulvis causticus Barbetti. § 5. But in the use of these you ought to preserve the parts adjacent with Defensatives; to convey the Medicament to the part through pipes; and to use them in the decrease of the Moon. § 6. Yet are Medicines seldom effectual in this Disease, being most commonly used by manual Operation, where-

in you must either draw it out with a pair of *Forceps*, removing what remains by § 2. and 4. Or remove it by a Thread, if it can conveniently be put about it. § 7. If it be livid or black and blew, it will scarcely yeeld unto Medicine, but soon degenerates into Cancer. In this case, 2 yolks of new laid Eggs beaten together, in a leaden Mortar, even to blacknels, and made into an Unguent with Camphir ʒj. is commended: so also *Onguentum e Plumbi* ʒj. mixed with Extract of Opium ʒij. in a leaden Mortar, as aforesaid.

XXIV. *Παρονυχία*, Paronychia, *Panaritium*, a Felon, or Tumor at Fingers ends.

§ 1. Let there be a general purgation of the Humors of the Body, then apply Anodynes and Maturatives; or foment the Finger a while in a decoction of Camomil, Melilot, Elder and *Carduus Ana.* boyled in milk; Or apply this Cataplasim. R *Flowers of Dill*, Elder, leaves of *Herbane*, A. Mj. Poppy seeds, Line seeds, A. ʒiiij. powder of Marsh-mallow Roots ʒjss. boyl in Milk to a consistence. § 2. By no means use Repellers, or Astringent Medicines, least you impact the matter the more in the part, and augment the pain: but if the afflux be over-great, you may apply them very nigh to the part next above it. § 3. Then make Incision, upon the place affected, according to the length of the Finger, and if the matter lyes deep, to the very bone, for the most part there appear one or more red spots, containing a sharp matter, but little in quantity, which is the cause of

the Disease. § 4. After the Apertion, at the first dressing, apply *Mithridate* dissolved in S.V. to hinder Inflammation and Swelling, and apply three or four fold, doubled linnen Cloths, dipt in hot *Posca* (or Vinegar and water mixed together) to the whole Arm. § 5. This Incision ought to be made (according to the Opinion of *Gulielmus Fabricius Cent. 1. Obs. 97.*) in the very beginning, for otherwise in the concoction of Humors, there will be Inflammation, Tumor, and vehement pain, so that the bones are in danger of being eaten through, because the skin in that place is of an extraordinary thickness, and that matter of the Paronychia, Acid, Malign and Poysonous: But *Sennertus* saith, this Incission profits little, unless the matter be first converted into Pus. § 6. But if Incission cannot be admitted, you must first suppurate with the things mentioned Sect. 1. and 2. or with *Empl. de Galbano Crocatum*; then the Tumor being broken, or rather opened (which is then done with little or no pain) the Pus is to be drawn forth, the part cleansed, and then healed with this Incarnative. R *Fine Aloes* ʒij. Myrb, *Frankincense*, *Sarcocol*, A. ʒj. Mell *Rosarum* ʒij. Turpentine ʒss. mix them. § 7. *Riverius* has two observations of Felons by putting the Fingers into a Cats Ear. one was cured in a quarter of an hour, the other in few hours: and I have known four or five cured with this. R Soap ʒss Turpentine ʒij. Salt ʒj. mix and apply it. § 8. If the part should

should Gangreen or Sphacelate, either by neglect of Patient or Physician, let it be taken off; except you will commit the business to Nature, which oftentimes separates and throws out this Bone. If any Excrecency should grow, it is to be removed by the Knife or Exuding Medicines. § 9. To this affect we add Rediviva, Whitloes, which differs from the former in this; that *Paronychia* is an affect at the fingers end; this is a separation of the *Cuticula* about the Nail of the Finger, most commonly very painful and troublesom. § 10. They are cured by being brought to suppuration; then opened or prickt with a Needle that the white matter may run out, after which they heal of themselves: We have often brought them to suppuration with the Linament at § 7. abovementioned.

XXV. *Charatoides*, Glandulous Tumor.

§ 1. *Bronchocele*. First evacuate with those things which we prescribe in *Strumæ*; or the *Tinctura Phlegmagoga Grulingij*: which give at least 30 times, once in 4 days; and in the intermediate days this Powder. *R. Diospolisici ℥iij. Myrrh. Roots of Orrice, burnt Allum A. ʒiſs Sugar Candy ʒiij.* make all into a powder and mix them, of which give ʒiſs. every intermediate morning, between purging, in a Glass of Rhenish wine: Outwardly apply *Empl. de Galbano Crocatum*. or *Vigo's Empl. de ranis cum Mercurio*, or *Diasulphuris*; or anoint with Balsam of Sulphur. § 2. If these things prevail not some ad-

vise to Fluxing; yet that is, none of the best in this case § 3. If none of these ways prevail, you must remove it by Corrosives (avoiding Arsenick and Orpiment :) Or else by Section which is better: you must make the Apertion in a right line, observing the Fibres of the Muscles, which being on the neck, must be long ways, taking heed that you hurt no Vein, Artery, nor Nerve, rather than to hurt those Vessels, you had better cut the Fibres cross: If the Tumors be great, you must make a double Incision, cross ways, taking heed, as aforesaid of the Vessels, then with your fingers remove the bag, which seldom or never sticks to the skin; and cutting off the little Artery by which it is fed, having a care that not the least particle of the bag may remain, lest it grow again; the best Instrument to do it, is an Incision Knife, Lancet pointed: After heal it as another Ulcer. § 4. *Atheroma*, *Steatoma*, and *Meliceris*, although they differ in their Names, and contain each a peculiar matter, yet they have all almost one and the same way of Curing, therefore, § 5. You must thoroughly purge the Body, and evacuate the vitious Humor, by which those Tumors are fed, by such things as we have advised at § 1. Then the conjoynd matter which is the cause of the Tumor, is to be taken away, together with the *Cistis* or *Tunicle* it self, as we have directed at § 3. unless that you can take it away, either by Discussion, or bring it to Suppuration. § 6. In *Meliceris*

this

this 3 fold kind of remedy may take place : In *Atheroma*, it may be done by *Discussives* and *Suppuratives* without Section : But in *Steatoma*, it is best done by Section alone. § 7. If you design Resolution, you may use *Balsam of Peru*, *Balsam of Sulphur*, *Empl. diaphysuris*, *Oxyroceum*, de *Galbano Crocatum*, *Ceratum de Ammoniaco*, or this. R *Labdanum* ʒj. *Red Myrrh* ʒiij. *Camphir* ʒj. mix and make an *Emplaster*. Or R *Labdanum*, *Bdellium*, *Galbanum*, *Ammoniacum*, *Propolis*, *Turpentine*, *Ana*, melt and mix. Or R pure *Ammoniacum*, *Juyce of Pelitory*, A. ʒiij. *Oyl of the juyce* ʒvj. boyl to the thickness of a plaster : It is a very excellent thing. Or R *Sagapenum*, *Ammoniacum*, A. ʒls. *Roots of Pellitory*, *Euphorbium*, A. ʒjls. *Sulphur* ʒiij. *Oyl of Amber* ʒj. mix and make a Plaster. Or R *Quick lime*, mix it with *Grease*, this *Sennertus*, says is of singular benefit. Or, R *Ship Pitch* ʒj. *Ammoniacum*, *Sulphur* A. ʒls. mix them. § 8. If it breaks and the matter discharge it self out of the *Tunicle*, then use *corrosives* for other Medicines are too weak : if it breaks not, you must open it by Section (taking heed that you break not the *Cistis*) then pull it forth whole, and so rake it away. § 9. *Corrosives* and *Catharticks* for this purpose, are *Roots of black Hellebor*, *Burnt Galls*, *Burnt Date stones*, *Burnt Alum*, *Quick lime*, *Mercury sublimite*, *Verdigrise*, *Vitriol*, *Spirit and Oyl of Vitriol*, *Sulphur* or *Salt*, *Præcipitate*, *Liquor of Tartar*, *Unguentum Ægyptiacum*, *Fuscum* of *Fælix Wurtz*,

Oak Ashes, *Vine Ashes* : Or this Compound. R *Vitriol well sweetened* ʒj. *Verdigrise* ʒj. *Unguentum Ægyptiacum* ʒls. mix them for an Oyntment. § 10. *Steatoma*, *Atheroma*, and *Melicerides*, sometimes happen in the Head, and then they are called *Testudo*, *Talpa*, *Natta*, wherein there is little hopes of Cure, if the Bone is very foul, or much corrupted : otherwise they may be taken away by a Thread, or which is better by a Knife, when they reject other Remedies. § 11. The way of doing it with a Knife is thus : The skin being divided in form of a Cross, the Bladder or *Cistis* is to be taken out whole ; then the *Pericranium* being separated ; let the *Cranium* or Skull be scraped with a *Raspatory*, till you come to the sound part, then sprinkle upon it some *Astringent Poudre*, and let the skin be forthwith consolidated, which if it be too loose or large, a small part of it may be cut away, though this is not often needful. § 12. If the Sick will not admit of scraping the Skull, you must heal it without scraping.

XXVI. Ἀνεύρυσμα, *Aneurysma*, Rupture of an Artery.

§ 1. In the beginning of an *Aneurysma* let *Astringents* and *Repellers* be imposed to the place affected, to repell and qualify the Blood, and close the Rupture : for this purpose *Emp. ad Herniam*, either the Common, or of our prescription is of exceeding good use : And *Sennertus* commends a plate of Lead to be hard bound on, which does repell, thick-

thicken and close the loosened Artery. § 2. *Now, whether this Disease arises from the cutting of an Artery purposely, or by ill Accident,* you ought immediately to close up the same again, and to apply this Consolidative. *R Frankincense p. ij. Aloes p. iij. mix them well together with the white of an Egg: to which add the Ashes of a Hares skin q. s. which lay upon the Wound of the Artery.*

§ 3. *For this purpose you may prepare other things of the Roots of the Greater Comfrey, Mastick, Frankincense, Pomegranate-Peels and Flowers, Saccharum Saturni, Acacia or binding Bean tree, Hypocistis, Myrtle, Galls, Aloes, Terra Sigillata, fine Bole, Lapis Hematitidis, Emplastrum Diapalma, &c.* § 4. *But if these things will not do, some Artists persuade to Section, the manner of which we shall here shew; for the Tumor being opened, the Artery that is to be cut, must be intercepted by binding it about with two bands and then it must be dissected between the Bandages, which bandages are not to be loosed, till Nature has covered the Wound with Flesh, and the danger of an Hæmorrhage be over; but as it is an Operation so cruel that few or none will submit to it, so has it likewise much of danger in it, nor has the Sick always Cure by it; for upon loosening the Bandage, either an Hæmorrhage may be feared, or else that a new Aneurysma may be caused.*

§ 5. *The manner of the Operation out of Agineta, lib. 6. cap. 37. If the Tumor be caused by open-*

ing, let a strait Section be made longways, then part the lips of the skin far asunder by little hooks, so that the Artery may be made bare, severing it from its Membranes by Instruments fit for this purpose; then after the transmission of a Needle under it, tie it with two threads, and prick with a Pen knife the middle of the Artery, that what is contained therein may be evacuated: *lastly, apply Suppuratives,* till at length the ties of the Threads fall off. § 6. *But if it be from the Rupture of an Artery,* let the Skin be divided and the Artery tied both above and below, and cut out the middle with the Tumor, not losing the Ligatures till the Wound is perfectly cured, and there be no fear of an Hæmorrhage. § 7. *But to preserve life, Barbet advises to take off the Member: And Sennertus saith, the more secure and safe course is only to bind hard, and press together the Tumor with bands and Medicaments, that it may no farther augment.*

XXVII, *Kier* ♂, *Varix*, the Rupture of a Vein.

§ 1. *If the Varix be small and inconsiderable, Aquapendens orders it to be cured with Astringents; as, R Gum Tragacanth dissolve in Pomegranate Wine, or juyce of unripe Grapes, to which add fine Bole, Mastick, Sanguis Draconis; A. all in fine powder, so much till the Tragacanth becomes thick as Wax; so that in the Palm of the Hand it may be reduced into the shape and form of a Candle: He*
some-

sometimes also used *Hypocistis* for the same purpose. These Medicines he applied according to the length of the *Varix*, binding it down with a part of a Reed tyed fast thereupon, with a narrow bandage, and over all a Hose or Buskin made of a Dogs skin, which was put about, and fastned on the Thighs by lacing it on. § 2. *If the Varix be great, you must appoint a good Course of Diet, and several times purge the Body with Melanagages*, and if the Sick will permit it, you must then proceed to Section: But *Senvertus* would not advise to Section unless the *Varix* be so great, as to endanger an external Rupture, whence might come so great an effusion of Blood, as to bring with it Death it self: Or, unless the part be much inflamed and very painful: Or, there is present some great and malignant Ulcer; lest a worse Disease should succeed thereupon. § 3. *Paulus Aegineta shews the way of doing it, lib. 6. cap. 82. Thus Tye a String about the upper part of the Thigh, and cause the Diseased to walk, that the Varix may fill, then mark it with Ink according to the Scituation, the length of three fingers or more: after lay the man upon his back, with his Thighs extended: bind another String about, above the Knee, so will the Varix be lifted up a considerable height. With a Pen knife in the place marked, cut, but only no deeper than through the skin, by no means dividing the Vein: distend the lips of the*

Section or Skin with little hooks; excoriating or fleying off the Membranes with a crooked Incision Knife, so that the Vein may be laid naked and bare; then loosen the Thigh bands, and by a little hook elevate the *Varix*, under which cast a Needle drawing with it a double Thread, cutting in two the bow: this done, (the Vein being divided in the midst by a Venesection Penknife) evacuate and let forth as much Blood as is needful: after this, with one of the Threads tye close together the upper part of the Vessel; and the Thigh being extended straight, with your hands press forth the Blood that is in the Thigh; then with the other Thread tye close together the nether part of the Vessel: this done you may now either cut off and take quite away that part of the Vein that lyeth between the Ligatures; Or, otherwise let it remain, till at length together with the Threads, it falls out of its own accord. § 4. *The Operation being over, put in dry Liniments, and a long Spleen like Emplaster, after it has been thoroughly washt with Wine, and Oyl put thereupon, then bind it down close, and cure it with a Course of suppurating Medicines, in the form of Liniments. § 5. Cornelius Celus lib. 7. cap. 31. shews a twofold manner of Curing these Varices by Chirurgery; One by cutting as aforesaid; the other by burning with a red hot Iron, which being terrible, not usual, and dangerous, we shall here forbear the man-*

manner of the Operation, and rather referr such as approve of that cruel work to the Author aforecited himself. § 6. *Aquapendens* approves not much of either of these ways, but thinks the Cure better to be done by intercepting of the Blood, application of Astringent Medicaments and strong Bandage. § 7. But for the Evacuation of the Blood that is already flown in, *Hippocrates* teacheth how it is to be done: the Vein is not to be cut with any great and wide Gash, lest thereby a great Ulcer be caused; but the *Varix* is again and again to be pricked whensoever it shall be fit, by which means the Blood already flown in, will be evacuated; and this you must do by little and little, not all at once, but as it were by Degrees, till the Vein does even fall down and sink, upon which then it will be good to apply such Astringents as we have mentioned *Señ. 26.* § 2. and 3. and § 1. above; with good and strong Bandage.

XXVIII. *Εμφύσεμα*, Inflation, a flatulent or Windy Tumor.

§ 1. These kinds of Tumors the Greeks call *Emphysemata*, *Pneumatoseis*, and *Empneumatoseis*; the Latins *Inflationes*, and we Windy Tumors. They are Generated (according to *Galen*,) by a flatulent Spirit, collected in certain Cavities. § 2. Let the Sick observe such a Diet as is prescribed in *Oedema*, adding such things as may hinder the generation of Wind; Wine, and Wine with Spices, *Hippocras*,

and such like are profitable.

§ 3. Let the Diseased avoid eating of Pease, Beans, Turneps, Carrots, and all crude Fruits, being things which breed Wind. § 4. The Stomach and Body must be corrected with purging and corroborating Medicaments, always mixing with them Carminatives, among which Oyls of Carraways, Mastich, Cinnamon, Nutmegs, Anise, Cummin, and Juniper berries excell: and some say that Spirit of Niter is very good, as correcting Flegm and Choller, hindering the breeding of Wind, and discussing of it being bred. § 5. *Anodyns* are also said to profit here, among which

Laudanum Paracelsi, *Liquor Anodyni*, *Laudanum Salmoni simplex*, and Our New London Treacle have the Eminency; for that besides their easing of Pain, they also by their Diaphoretick quality remove the Cause of the Disease, by powerfully provoking Sweat: Bleeding in this Disease is of very evil consequence.

§ 6. Medicines to be outwardly applied, discussing Wind, are Roots of Galangal, Lovage, Leaves of Chervil, Dill, Mint, Marjoram, Origanum, Penny royal, Rosemary, Rue, Savory, Flowers of Camomil, Elder, Melilot, Seeds of Anise, Carraway, Cummin, Dill, Daucus, Fennel, Grains of Paradise, Nutmegs; Oyls Distilled of Anise, Dill, Carraways, Limons, Oranges, Nutmegs, Spick, Rue, Sage: Oyl of Nutmegs and Mace by expression; Emplast. of Melilot, and Juniper Berries; Unguentum Martiatum, Aragon, & Excrescence.

strense. Or this Compound.
℞ Oyls of Wormwood, Rue, Juniper berries, A. ʒij. Distilled Oyl of Mace, ʒj. Oyl of Nutmegs express ʒij. Castor ʒj. dissolved in Aqua vite, mix and make a Liniment. And here may have place Cera-tum de laudano Cratonis, Empl. Nervinum, sine pari, & de Ranis, with trebble quantity of Mercury. See our Pharm. Lond. lib. 5. cap. 5. sect. 5. and cap. 6. sect. 38. 40. 42.

XXIX. Tumor Aquosus, A Watery Tumor.

§ 1. The Diet here observed is the same as in Oedema. All moist and humid things are to be avoided, and such as generate watery humors, things hot and dry are best, except Spices, Strong waters and Salt food. § 2. The watery and serous humor is to be evacuated by Stool, for which purpose you must use Hydragogues, as the Tinctura Cathartica Clofæi, Catholica Grulingij, Phlegmagoga Grulingij, Hydragoga Grulingij, Sal Vitrioli, Resina Jallapæ, Pilulæ ex duobus, &c.

§ 3. This done, you must Order that the Diaphoresis, and Insensible Transpiration may be free and uninterrupted, as also that you provoke Urine with Nephriticks, to the end that not only the serous humor may be evacuated all ways, but that Nature might be a little corroborated. § 4. A present fault or weakness in any Bowel destinated for Concoction is to be Corrected, but that cannot be, till it is freed from the watery humor, which you may do by the Medicines at § 2. Or some of these

following, viz. Roots of Asarum, Dwarf Elder, Jallap. Mechoachan, Leaves and Bark of Elder, Euphorbium, Turbith, Cam-bogia, Species Diacarthamum, Cream of Tartar; but above all is the Vinum Hydragogum of Barbet in Our Doron lib. 2. cap. 23. sect. 3. § 5. The conjoined Cause is next to be considered, which you must either discuss, Or take away by opening the Tumor. § 6. Those things that discuss and dry up the Watery humor are chiefly Rue, Elder, Danewort, Camomil, Dill, Roots of Orrice, Briony, Birthwort, Flower-de-luce, Bay and Juniper berries, leaves of Celandine, Gentory, Calamint, Marjoram, Meal of Beans, Orobus, Sulphur vive, Salt, Alum, Ammoniacum, Bdelium; of which things you may form Fomentations, Cataplasms and Emplasters. § 7. First foment the part to open the Pores; then apply Cataplasms to discuss, at last apply an Emplaster to strengthen the weak part.

XXX. Abcessus, Apostema, An Aposteme.

§ 1. Whilst the Abcess or Aposteme is in the way of maturation, you must cherish the heat of the part by Medicaments that Concoct and encrease Pus, and ease the present intense pain. § 2. Such things are called Chalastica and Anodyna, for that they take from the part all sense of pain; such are Milk, Butter, Oyl, Hogs grease, Capons grease, Ung. Dialthææ, Emplast. Diachylon simplex. § 3. What things hasten suppuration, we have shewed at large Sect. I. and II. such are these, Oyl mingled

mingled with Water, and simple without mixture, Wheat flower and Bread of the same, Fats of a Calf, of a Hog, of a Hen, of a Goose, Pitch, Rosin, Wax mixed with Oyl, Ung. Tetrastapharmacum, &c. The mucilages of Line seed, Fænugreek seed, Mallows, Marsh mallows.

Or this Cataplasim. *Rx* Powder of *Althæa* Roots, *Mallow* leaves, *A. 3j.* Wheat flower *3jss.* Seeds of *Line* and *Fænugreek*, *A. 3ss.* Saffron *3ss.* boyl them in Milk or Decoction of dried Figs; to which add Hogs Grease, Unguent. *Dialthææ*, *A. 3j.* mix and make a Cataplasim. § 4. But if the Tumor be cold, you must use hotter things, such are Turpentine, Gums of the Fir-tree, Larch Tree and Pine tree, dried Figs, Raisins, Line seed, Fænugreek seed, roasted Onions, Leven, Oyls of Camomil and white Lillies, old Hens fat, Old Butter, Bdellium, Galbanum Ammoniacum, Emp. of Melilot and Diachylon magnum: Or this Cataplasim. *Rx* of the former Cataplasim *3vj.* Leven *3vj.* Camomil *3ij.* Old Hens fat, Oyl of Camomil, *A. 3jss.* mix for a Cataplasim. If you add white Lilly roots, Onions, Turpentine, *A. 3j.* it will be yet stronger.

§ 5. When the Aposteme is come to full ripeness; it is then to be evacuated and cast forth of the body; which is done either by discussion, (which is very seldom and rare) Or by opening of it (which is much the better way) be it done either of its own Accord or by Art.

§ 6. Now to know when an Aposteme is fit for opening, you must

have respect to the Signs of its maturation, which are an abatement of the intense pain and inflammation: the swelling round about is diminished, and the Pus seeking its way forth, causes the Tumor in one part or another to be lift up, and to be sharp pointed; the extension and hardness is a little remitted, and the sick is sensible of ease, with a kind of lightness, for that the matter is all gotten together, into one part: at length if the place be pressed down with the Finger, there is a softness, and sometimes a certain kind of floating of the matter underneath; but this floating is scarcely to be perceived, if the matter be very thick and lyes deep, as Hippocrates, Lib. 6. Aphorism. 41. has signified. § 7. The Abscess being now found by the Signs to be fit for Apertion, you must perform it as we have taught, Cap. 15. Sect. 37. 38. of this Book, where the Operation is expressed at large. § 8. Now if upon opening of the Aposteme, great pain should ensue, or a flux of Blood, or a swooning; in this Case the Section must be performed with the greatest speed and care that may be. § 9. If an Hemorrhage be feared, you must have in a readiness, these things which stop the flux of Blood, as Frankincense, Aloes, white of an Egg, fine Bole, Sanguis Draconis, Pomgranate rinds and Flowers, burnt Alum, Caput Mort. of Vitriol, and several others, which both Our Doron, and our Pharm. are able to furnish you with. § 10. To prevent fainting and Swooning, especially

cially in Children, Women and fearful persons, you ought to have in a readiness *Spiritus Angelicæ magis compoſitus*, *Aqua Mirabilis*, or *Cœleſtis*, or that of *Matthiolum*, letting the Sick ſinell to Oyl of Roſemary, Spike or Savin which is better than either; or in deſperate Caſes to Spirit of *Sal Armoniack*. § 11. And likewise that the Section may be rightly performed, the Chirurgical ought to know the Condition of the part; the Scituation of the Veins, Arteries and Nerves; as likewise the nature of the Muſcles, without the exact knowledge of which many irregularities, enormities and errors may be committed, even to the hazard of the Patients life: for Veins and Arteries being cut, a violent Hæmorrhage may follow: the Nerves being cut, either intollerable pain may ariſe, or the Member may altogether be deprived of ſenſe, or both: and the Muſcles being cut, the part may be wholly deprived of its motion. § 12. Moreover, regard ought to be had to the Fibres of the Muſcles, that Section may be done according to their conduct, and not overthwartly or croſs to them; and that ſome conſideration be had to the greatneſs of the Section; if it be too little the Pus cannot come forth without compreſſion of the part, which may both excite pain and beget a brawnineſs, thereby hazarding a *Fiſtula*: if it be too great, there may be either an ugly Scar, or the Ambient Air may get too much in and alter the part. § 13. To

make the Inciſion, Sennertus admits of either the Kaiſor or Inciſion Knife; Or a Knife Myrtle ſhaped, edged on both ſides, with which the Italians and French open Veins; Or with the Lancet; Or, laſtly with the *Syringotomos*, an Inſtrument crooked, and of only uſe in the Inciſion of an Internal or Concavous Body. § 14. The Inciſion being made; if there be but little Pus, you may gently preſs the part, that it may the better flow forth: but if there be much, you ought to evacuate leiſurely, and by little at a time, leſt if all ſhould be let out together, the Spirits ſhould be too much waſted, and ſwooning follow. § 15. After Inciſion, and emptying of the Pus; the firſt day you may ſtrew on the Duſt of Frankincenſe: on the ſecond day lay on ſome kind of Digetiſſive; that if any thing remain not perfectly ſuppurated, it may be compleated; and if any kind of naſtineſs does occur let it be wiped away; and then cleaned with this, *R Turpentine ꝑj. Honey of Roſes ꝑiſs. Barly meal, q. s. mix them and apply it.* § 16. Laſtly, if the Ulcer require yet more forcible cleaning, you muſt uſe ſtronger abſterſives as *Unguentum Apoftolorum*, &c. and at length *Sarcoticks* or Medicines breeding fleſh are to be prudently applied to the Conſummation of the Cure.

APPENDIX I.

Concerning the kinds of Scabs at Sect. XVI.

XXXI. Volaticæ; the Running Scab.

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§ 1. This for the most part infects all the skin in one night. § 2. In order to the Cure, it is necessary that general remedies be first prescribed to carry off the Cause, among which this is good. *Rx* Confett. Hamech ℥ss. & dulcis gr. xij. mix them; Or this, *Rx* Diacarthamus ℥vj. & dulcis gr. xij. mix and give it for one Dose. § 3. Outwardly apply the Blood that comes from a Woman with the After-Birth: Or Anoint with the Blood of a Cat: Or with an Ox-gall mixt with S.V. afterwards wash with the Lac Virginis of Schroder.

XXXII. *Porrigo, Achor, Favus*; A scald head.

§ 1. It is a crusted Scab, happening as well in Old as Young people. The Scurf is oftentimes very thick, accompanied with moisture, which causeth a great itching; and a very ill smell. § 2. It is caused from Salt Flegm, Or of a Salt, Serous and Pituitous humor. § 3. It is for the most part a long and rebellious Disease, not easily cured, and often when seemingly well, returning again. § 4. The Cure is first by evacuating the humor with what we have directed Sect. 16. § 1. 5. 8. Or Our Tinctura Cathartica Magistralis, or Sena, or juice of Fumitory in Goats Whey. § 5. Secondly by using the Baths and applying the Unguents at Sect. 16. § 6. 7. for a few days: Or this Decoction of Barber's. *Rx* Pot ashes, and make a Lixivium with Wine of an indif- ferent sharpness; in a quart of which boy Leaves of Marjoram, Southernwood, 4. Mij. Maidenhair

M. j ss. Rose Leaves M. j. with which make a Fomentation; with this he professes he has often cured this Disease alone: but if you cannot get Pot ashes, you may use Salt of Tartar instead. § 6. But above all is our Cataplasma ad Porriginem to be applied, as in the place directed: Excellent good also is Valentia Sabiosæ.

XXXIII. *Vari*, Pimples of the Face.

§ 1. They are little hard Tubercles on the skin of the Face, made of a coagulated thick iuyce, being about the bigness of Hempseed, and infecting young People who are inclined to Venery, but yet Chast withal. § 2. They are cured with difficulty, if there be a deep redness in the face with Pustles; especially if there be withal a bloat face, and hoarseness of Voice. § 3. In order to the Cure use the general Evacuations at Sect. 16. § 1. 5. 8. Or an Infusion of Sena in Water sharpened with Sal Tartaris. § 4. Then outwardly, Oyls of Vi- triol, Sulphur or Tartar touch- ed upon the places in the Even- ing, and washed off the next morning with Decoct. of Bean- meal, or Wheat Bran which are much commended. § 5. Emollients and Discussives are of good use here; as *Rx* Meal of Lupins and Orobus A. 5 j ss. Roots of Mallows peeled, and Flower-de-Luce, A. 3ij. Sal Armoniack 3j. with Mucilage of Gum Tragacanth make Troches, which at the time of using may be dissolved in Milk. Or, *Rx* Li- tharge 3iij. Turpentine 3iv. Oyl 9. 3. mix them. § 6. If they be

harder than ordinary R black Soap
℥ss. Ammoniacum, Frankincense,
A. ʒi β. dissolve in Water to the
thickness of a Cerate. Or,
R juice of sharp pointed Dock
ʒij. Vinegar of Squills ʒss. Ammo-
niacum dissolved in Vinegar ʒij.
Borax ʒi ss. Alum ʒss. mix them.

XXXIV. *Sirones, Chirones,*
Pustles in the Palms of the
Hands and Soles of the Feet.

§ 1. *These Pustles have certain
little Worms in them, exceeding
small, hid under the Scarf skin.*
§ 2. *They arise from much Chole-
rick sweat, restrained within the
skin, and this affect comes in
these places chiefly, because
that the more thick and gross
Ichores or Ulcerous excrements
are in every scabbiness, detain-
ed and held under the skin,
which in the aforesaid places,
are more thick than elsewhere.*
§ 3. *These Worms lying hid in the
Pustles, are discerned by the ex-
ceeding Itch which is felt more
than at other times.* § 4. *In
order to the Cure, these Worms are
to be picked out with a Needle or
other fit Instrument, then (that
they may not breed anew) the
places are to be washed with
Wine or Vinegar, in which Salt,
Alum, or Niter has been dissol-
ved: Or in a Decoction of Oak-
leaves with Alum: Or, in a Lix-
ivium of Broom and Oak Ashes:
Or in Tincture of Sulphur made
by boyling in Oyl of Tartar;
and then after to anoint with
Unguentum Mercuriale Sennerti,
which see in Our Doron lib. 3.
cap. 43. sect.*

XXXV. Φλύκταιναι, Phly-
æne, Phluctides, Phluzacia,

Phluceis, Ignis Sylvestris, Wildfire.

§ 1. *They are little Blisters rais-
ed in the skin by the sharpness of
humours, commonly called Wild-
fire.* § 2. *They arise from a serous and
bilious humor sent forth to the skin
either by nature, or some exter-
nal Cause.* § 3. *They are known, be-
cause they are Blisters like those
that proceed from scalding, and
when they are broken a yellow-
ish humor breaks forth.* § 4. *They
endure not long, seldom above
two or three days. They sel-
dom happen to Old People,
more commonly to such as are
young: if evilly cured, they
sometimes degenerate into Her-
pes.* § 5. *First evacuate the
Peccant humor; then Foment with
a Decoction of Ducks meat, Night-
shade or Purslane.* Or apply an
Epitheme of strong Lye, made
of Beech Ashes, beat up with
Linseed Oyl, and Oyl of Wal-
nuts Ana, which use often,
§ 6. *If they break not of their own
accord, thereby causing grievous
pain, prick them with a Needle,
squeeze them hard, and apply
upon them Cataplasma Scorbuti-
cum Mynsichti: Or Cataplasma
Fabritij (which see in Our
Pharm. lib. 5. cap. 7. sect. 4. and
7.) and they will suddenly be well.*

XXXVI. Ερνιδες, Ephelides,
Child bearing Spots.

§ 1. *They are brown rough spots,
Tubercles, or Eruptions in the
Skin upon Women with Child,
which come upon their Fore-
heads, Temples or Cheeks, ma-
ny times as large as an hand
breadth.* § 2. *They commonly
arise from the Suppression of the
Terms: in Virgins sometimes
from*

from eating of Beets. § 3. They are seldom cured till the Woman is delivered: and if perchance they be taken away, they commonly return again. After delivery, they for the most part vanish of their own accord. § 4. They are cured by a Pap made of the powders of Bayberries and Mushroom water, being often smeared on in a Bath: Or the Juyce of Bugloss roots. Oyls of Elder, Bitter Almonds and Tartar: Baths of Bean and Orobus meal with Camphir: To which add Almond milk, mixed with juyce of Limons, Butter-milk, Asses Milk and such like.

XXXVII. *Psyrdracia*, Bladder like Pustles of the head.

§ 1. They are small efflorescencies or Pustles like unto Bladders; made and spread up and down upon the surface of the skin of the head. § 2. They proceed from a Salt and Nitrous humor, mixed with Blood and Choller, and are one of the kinds of Scalds, happening to the head.

§ 3. The signs are evident by the Definition, nor does this Disease threaten any Danger at all.

§ 4. It is cured by these applications or such like. R. *Litharge*, *seruse*, A. ʒss. *Alum*, green leaves of *Rue*, A. ʒij. beat them well, and mix them with Vinegar and Oyl, with which anoint. Or, R. *Rue*, *Alum*, A. beat them well with Honey, and apply them to the affect.

XXXVIII. *Malum Mortuum*, the Dead Evil.

§ 1. It is a certain kind of a Scab, called because the part appears black, and as it were

mortified. § 2. It is a kind of Scabbies which troubles the Patient with a livid or Black color, with crusty Pustles that are black, foul, dry, without any matter, sense, or pain, and that chiefly in the Hips, Legs, and Ankles.

§ 3. It has its Original, from a Melancholy and Scorbutick juyce, being a Disease of long continuance, and very difficult to be Cured. § 4. It is cured as other Scabbiness, at Sect. 16. § 5, 6, 7, 8. foregoing: adding also Scorbutick Medicaments. § 5. Let the Sick often use those Baths or such like, specified in the place a-

forecited: and while he is in the Bath, give him a little Quintessence of Angelica, mixed with Venice Treacle: afterwards let the place be anointed with Ung. *Diapompholyges*, or one of the Unguents, at Sect. 16. § 7. a foregoing. § 6. Every fourth or fifth day, be sure to purge with the Infusion of the best Sena: and if the Disease be yet rebellious, you must have recourse to our *Hercules* (designed for the rooting out of the French Disease) as the Ultimate Remedy. What this *Hercules* is, is yet unknown to the World: in due time we may reveal it.

XXXIX. *Ἐπινυκτίς*, *Epinyctis*, The Push.

§ 1. *Epinyctides ita dicitur, ὅτι νυκτὸς ἐγένετο, quoniam noctu generatur, ut Galenus & Cel- sus docet*, but this is not always true; for sometimes they arise in the day time also; but the true reason of the name doubtless is because they dis- quiet most in the Night. § 2:

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Pushes are the worst and most painful of all kind of Pustles, being in colour somewhat pale or wan, and sometimes Blackish, or else White. § 3. There is vehement Inflammation with great pain, and a Tumor, about the bigness of a Bean, and sometimes bigger. § 4. When it Exulcerates or Breaks, there is a nasty snotty matter comes forth, Bloody and Watery; and sometimes a kind of Core. § 5. They are caused from a salt sharp, serous humor mixed sometimes with Melancholly, sometimes with Blood or Chol-ler, from whence it is, that the Color is not always one and the same. § 6. It is altogether like a Carbuncle, but not all out so great, nor does it proceed from malignity as that does: It is generally most exasperated in the Night, from whence (as we afore-declared) came the Name. § 7. They are very troublesome, by reason of the pain, causing restlessness, but no ways dangerous, for they denote the strength of the Expulsive faculty. § 8. You must evacuate the Morbifick matter by general remedies, which is best done after they are brought to Maturation. § 9. Apply Topicks which are Anodyn, Emollient and Maturative: for there is a necessity of breaking them, because of the nasty matter lodged within: See Sect. 2. § 3. 5. Where you will find the full matter for the Cure. § 10. There is another Tumor greater than Epinyctis, Commonly called Dothion, or Furunculus, mistaken by some for Paronychia, or a Felon: but by examination of the Signs and Causes, it appears to be a lar-

ger sort of Epinyctis or Push, proceeding from more thick and adust Blood, assuming almost the nature of Melancholy, which truly in my opinion is an Imperfect Carbuncle not Pestilent. § 11. In its beginning it is a small and inconsiderable Inflammation, growing forth with a little Pustle (tending towards a sharp and acute point) and in its greatest bigness not exceeding a Pigeons Egg, having a remarkable pain and redness when it tends to suppuration. § 12. It seldom comes single, and therefore may be said to be a kind of Epinyctis or Push: It is differenced from Phlegmon by its Form and Magnitude: from a perfect Carbuncle not Pestilent, because the Blood is not so much adust; and therefore may be brought to suppuration, which a perfect Carbuncle may not. § 13. If it be Epidemical and Pestilential, which you may know by its Blackness and Greeness, 'tis neither better nor worse than a true Plague Sore or Carbuncle. § 14. Furunculus or an Imperfect Carbuncle is not dangerous; and if it rise high pointed, nor is hard or forked it is easy to Cure: but if it be hard and deep it is more malign and dangerous: And if it be Pestilential, the hazard of Life is not small. § 15. The Cure of Furunculus you may search out at Sect. II. § 2, 3, 4, 5 and 6. But if it be malign and pestilential at Sect. III. § 2. to the 9. foregoing.

XL. Tinea, a kind of Scald Head.

§ 1. It is a Disease wherein the Hairs fall off one by one, being eat

eaten and consumed by certain Worms at their Roots : the Hair becomes uneven, and of the colour of Ashes, in whose ends the small Worms stick. § 2. It is accompanied with a dry Ulcer, corrupting the Hair ; and the Head is covered sometimes with a kind of crusty substance, sometimes Ash colour or Yellow. § 3. It is called Tinea, because that like as Woolen cloths are eaten with Moths, so is the Hair eaten by these Worms. § 4. They are bred of an Excrementitious humor, and nourished with the Aliment of the Hair, penetrating into the same. § 5. It has no danger in it, but yet is hard to be Cured : if it or Porrigo continue long, they often degenerate into Alopecia or cause Baldness. § 6. It is cured as Porrigo at sect. 32. foregoing. You may also foment with a Decoction of the great Nettle, and small Centory : So also Broom and Myrrh boyled in Vinegar and strained to wash with. Or, R Garlick, Centory the less, Ana, boyl in Vinegar and add the Gall of a Bull. You may also add Squils, and instead of Vinegar, boyl it in Lye or Urine. § 7. All bitter Herbs are very good in this Case, as Southernwood, Rue, Aloes, Wormwood, &c.

XLI. Χείμελα, Perniones, Chilblains, or Kibes.

§ 1. They are swellings, which arise in the Winter time upon the Heels, Toes and Fingers, with other parts of the Hands and Feet. Senertius saith, That he once saw a Noble man, which had such a kind of Disease on

the very Tip of his Nose. § 2. They are caused from the Winters cold, weakning those parts by drawing pain and Blood into them. § 3. They are known by an undue cooling of the part going before, then an Inflammation, Redness, gentle Tumour, and Itching, with sometimes pain, which ceases and returns again by fits, the tumor remaining. § 4. These Tumors have no danger in them, yet notwithstanding if they be not speedily cured, they commonly prove tedious, and of long continuance, and often return again for many years. If the Tumor grows very great, and meets with many heats and colds, it commonly breaks and exulcerates : and then the Tumors, which before were called Chilblains, or (as the common people call them) Bloody-falls, loote that name, and get the appellation of Kibes. § 5. These Inflammations are commonly cured by fomenting the part with Milk Blood warm, wherein Bay-berries, Rosemary, Rue, Organy, Sage, Fennel, Cammomil, and Pennyroyal or Savory have been boyled : Or by putting the part into a warm decoction of Frozen Turneps : Or when the Itching and heat is over, and the part is very cold, to dipt it into a pail of cold water almost frozen ; Or to rub them well all over with Snow : Or while they are hot, and in the fit of Itching, to burn them with the flame of a Candle : Or to Bath them well with Beef Brine : Or to Soak them with S.V. § 6. Or you may make

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Compounds after this manner. *R* Rhemish Wine ℥ij. Alum ℥ij. boyl them and Bath therewith. Or *R* Oyl of Bays ℥ij. Honey ℥ij. Turpentine ℥ss. mix them. Or *R* Turpentine, fresh Butter, Oyl of Mace, A. mix them. Or, *R* Oyl of Wax, Oyl of Roses, Olibanum, Honey, A. mix and anoint therewith. § 7. But if they be broken and exulcerated, you must cleanse them by washing with our Aqua Ophthalm. then strewing upon them fine Powder of Aloes, or Scammony, which is better, and laying over it Emplastrum Catholicon, or a Plaster of some good Vulnerary Balsam. § 8. Sennertus saith, That Alum powdered, and mixed with Frankincense in powder, Ana, then mixed with a little Wine, is excellent to lay upon the Sore. Or, an Unguent made of the Ashes of River Crabs, mixt with Honey and Oyl of Roses. If they prove rebellious you must cure them after the manner of other Ulcers. § 9. Barbet commends this Emplaster as an Admirable thing for this purpose. *R* Frankincense ℥ij. Litharge, Myrrh, A. ℥jss. Red Lead ℥j. powder of Galli, Round Birthwort, A. ℥ss. Camphir ℥j. Mercury sublimate (in subtile powder) gr. vj. Rams or Dears Suet and Rosin, A. enough to make it into a Plaster.

APPENDIX. II.

Of the species of the Lepresy at
Sect. XVII.

XLII. Agurh, Leuca, (which is the Albaras alba of the Arabians),

a continued blot piercing the skin and flesh.

§ 1. It is a Disease changing both the color and substance not only of the skin but of the flesh also.

§ 2. It is known by the Hairs falling off, and other growing in their places like down: the skin is flatter than in other places, and if prickt with a Pin, a Watery and White Liquor comes forth.

§ 3. It is caused of a Phlegmatick Blood, making the flesh of a middle nature, between those Animals which have Blood and are Bloodless; making it almost like to the flesh of Oysters, and Locusts.

§ 4. It is without danger, but a very filthy and loathsome aspect: if it be but small and has some kind of redness in it, it is cureable: if it be in the Hand or Foot, it is of difficult cure: if it wax not red when it is Rubbed, and being pricked does not Bleed: Or seizes upon, and possesses a large and spacious place: Or is of long continuance: Or perpetually increases: it is incurable.

§ 5. The Cure consists in first washing and consuming the humors, thereby to hinder their afflux to the skin, and to prevent the generating of new matter: Open with the Juices of Hyssop, Pennyroyal and Savory, or Scurvy-grass, mixed with Juice of Limons: Then purge with Agarick Mechoacan, Turbith, Colocynthis, and the like: sometimes use Vomits and sometimes Diureticks. § 6. Then Administer Antidotes, as Tincture of Antimony, Venice Treacle, Or Our London Treacle: Or Quinrescence

sence of Sassafras, or Savin, to waſt and conſume the cold and crude humors. § 7. After this come to Topicks, where firſt let the place be well rubbed with courſe, rough cloths, to open the Pores; then apply ſuch things as may diſcuſs, cleanſe and draw Blood to the part affected; ſuch is *Dropax conſortans* (in *Our Pharm. lib. 5. cap. 5. ſect. 15.*) and things that Blister, and are as it were Caſticks. § 8. Such things are Muſtard Seed, Rocket Seed, Treacle Muſtard Seed, Niter, Euphorbium, Cantharides, Water Dragon Root and the like. § 9. Theſe cleanſe, as Meal of Orobous and Lupins, Gerſtian, Beans, Figs, bitter Almonds, Night ſhade, Sulphur, Parietary, Wild Cucumer root, Briony root. § 10. You may apply *Veficatorijs*, ſo long, till the Bliſters are excited.

XLIII. $\text{A}\lambda\phi\text{O}$, *Alphus*, *Morphæa*, *Morphew* or *Scurff*.

§ 1. It is a Diſeaſe changing the colour of the Skin, as it were with Botches or patches of *Morphew* or *Scurff*, here and there ſcattered up and down, with a kind of roughneſs, brannineſs, and deformity. § 2. It is twofold, either white or black. § 3. In the white *Alphus*, the hairs retain their natural colour: In the black (which *Celfus* calls *Melas*) there are broad blackiſh Spots (Scales as it were) here and there diſperſed up and down throughout the ſkin. § 4. Theſe *Alphi* are eaſily known by ſight; and the color whether white, black or brown, is accompanied with a certain roughneſs, as it were in

drops diſperſed. § 5. Both *Alphi* in all things (except the color) agree; and if the ſkin be prickt with a needle there iſſues forth Blood. § 6. The White ſprings from Flegm by default of the Liver: the black or brown from Melancholy by default of the Spleen. § 7. *Alphus* differs from *Leuca* in this, that here the ſkin (and not the fleſh) is only affected: in *Leuca* both fleſh and ſkin are vitiated. § 8. The White is eaſier cured than the black; and both eaſier cured than *Leuce*, although *Leuce* be but in beginning. § 9. The Cure obſerves almoſt the ſame Method as the former: but you muſt uſe milder Medicaments: firſt ſoment the part with *D. coſtum Canceri* (See *Our Pharm. lib. 4. Cap. 14. ſect. 11.*) or with this, R Roots of Sorrel and wild Cucumer, A . $\frac{3}{4}$ j. leaves of Celandine and Fumitory A . Mj . boyl them in water and Vinegar, *Ana*: the part being ſomented anoint with this Unguent: R *Juyces* of Celandine, Sorrel, Fumitory, Scabious, A . $\frac{3}{4}$ jſs. Muſtard ſeed ground $\frac{3}{4}$ j. Hens greaſe q. s. make an Oynment. § 10. In the black *Alphus*, firſt let the ſick bath with the Baths at *Sect. 16. § 6.* then apply a Cataplaſm made of Muſtard Seed, and Water or Vinegar; which let lye ſo long, till there is perceived a Mordication or biting. Or you may make a Cataplaſm of Muſtard Seeds, Venice Soap and Water, and apply it as the former. § 11. But be ſure that the Diet be good; that the Blood be corrected and amended; that he abſtains from all Salt, Acid, Smoaky, Dried, Thick, Viſcous

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and Clammy meats; and that Frictions be used every morning, with course cloths, the part being first anointed with Oyl of bitter Almonds.

XLIV. Mentagra, Impetigo agria, a Leprous Ulcer of the Chin.

§ 1. *It is a disaffect of the Chin, sometimes as it were overspreading the whole Countenance, the Eyes alone being free, and thence descending into the Neck, Breast and Hands, with a filthy kind of roughness and branniness upon the skin.* § 2. *It was of old a most inveterate Disease, and so contagious as to be caught by kissing.* § 3. *The skin is made hard, dry, and rough, and as it were full of Scales, with a certain kind of redness, which sometimes a little Ulcerates: there is present an Itching, and the Disease extends it self every day, till it becomes of a great breadth.* § 4. *It arises from a thin, serous or wheyish humor, generated from a Salt, sharp, and corrupt kind of Diet.* § 5. *It is not dangerous; if newly begun, it is easily cured: If it grows old and inveterate, it may degenerate into Lepra.* § 6. *As to the Cure, what we said as to the Evacuation of the Humors, at Sect. 42.* § 5. is to be observed here. § 7. *As for Topicks, anoint the part 15. or 16. or 20. times a day, with Spittle; for that, if the Disease be recent and mild, will do the Cure: if this will not do, you must follow the Method in Sect. 10. Or that for the Cure of Scabs in Sect. 16.* § 5. 4. 7. 8. *Or this Unguent commended by Valeriscus and Guido. R Juniper-berries well beaten ʒj. hogs grease*

ʒvj. boyl them, strain, and put in Turpentine ʒj. being cooled add Sulphur Vive ʒj. mix them well in a Mortar for an Unguent. § 8. *But if these things will not do, but that the part becomes callous, you must use Excoriatives, as Pampulus heretofore used at Rome.*

XLV. Elephantiasis Græcorum, seu Lepra Arabum, The Arabian Leprosy.

§. *This is a Malignant, poisonous and contagious Disease, being an Universal cancerous Tumor of the whole Body, arising from Atrabilis, infected with a venomous quality, and shed into the whole habit of the Body, causing many Symptoms.* § 2. *It is called by several other Names, as Elephas, Elephantia, Leontiasis, and Satriasis.* § 3. *Celsus gives you this short Description of it; the whole Body (saith he) is affected, so that the very bones may in a manner be said to be vitiated and corrupted. The highest and utmost parts of the Body have in them both Spots and Swellings, which stand thick and close one by another, the redness of those parts is by little and little converted into a black color, the top of the skin is unequal, both thin and thick; soft and hard, and is exasperated by certain Scales. The Body waxeth lean; the Mouth, Calves of the Legs and Feet swell and are puffed up. When this Disease comes once to be old the Fingers and Toes are quite hidden under the Swelling. There arises also a light and gentle Fever, which consumes and wastes the Sick*

Sick, already over-whelmed with the aforesaid evils. § 4 But Sennertus more excellently sets out this Disease thus: The Disease having gotten forward in the skin, the Native color of the face is changed; Pustles arise, red, blewish and wan, the Cheeks, and skin become thicker; the Veins under the Tongue are swoln up and wax Black; the hair falls off, there is an extraordinary thirst and dryness in the mouth day and night; and a roughness of the skin, with risings, many scales and chinks, especially in the Face, Hands and Feet. The Disease being confirmed, the Eyes are as if exactly round, and look as if fixed and immoveable; the Eye-lids and the Ears are contracted and drawn together; the Eye-brows fall down; the Nose swells outwardly, and is made flat, by reason of the great afflux of the humor; the breathing is hindered, so that they speak as it were through the Nose; the colour of the Face is wan and livid; the Aspect is frightful; there are Tubercles and red Pustles under the Eye-brows, about the Ears, and in diverse places of the Face; and hard and round knots like to grains; the Lips are thick; the Bones near to the Ears stick forth: the Hairs of the Head shed and fall away: and if an Hair be pulled forth, a part likewise of the white skin is pulled away together with it; which is a most certain and infallible sign of the Leprosy. The Breath stinks: the Voice is hoarse, shrill and

obscure: the Muscles of the Hands are extenuated: especially between the Thumb and the fore-Finger: the Nails clear: there is a stupidity and want of feeling in the Ancles, in the Calves of the Leg, and in the Feet: so that although the sick be pricked with Pins or Needles, in those places, yet they feel it not, which is from matter obstructing the Spirits access to those parts. The same sometimes befalls the Fingers and Toes, in which there is a coldness and a privation of all Sense and Feeling. Sometimes this stupidity and sleeping extends it self to the whole Arm: and from the Foot to the Knees, thighs and Hips: and sometimes the sense of Feeling is diminished, throughout the whole Body: for all the Nerves and Pores being obstructed, by the thickness of the Morbifick matter, the Animal Spirits cannot have their access. In some places under the skin, a pricking as if it were with Netles is felt, with a certain kind of itching and tickling as if Worms were there. The Skin it self is become wholly unctious or Oily. The Blood being washed leaves Sand in the bottom of it. There is scarcely any Evil, Mischief or Inconveniency, which is not annexed to this Disease. No part hardly within or without the Body is found. But above all the Face is especially to be considered, for no one is rashly to be accounted Leprous, unless the Figure of the Face be corrupted. § 5. The Cause of this Contagious Disease is

Attrac

Atrabilis diffused and spread abroad through the Habit of the whole Body. This *Atrabilis* (by the Opinion of almost all Authors) is the Aduſtion and burning of other Humors. *Avicen* ſaith, of them all; as of Blood, Flegm, Choler, Melancholy, and Chyle. The Aduſtion of one or more of the three laſt, is moſt probable; which being mixed with the Blood, is conveyed into the habit of the whole Body, through all the Veins, conjoynd with a certain Malignity, or Contagion, together with an inductive Feaver non-putrid. Some contract this Diſeaſe from their very Birth, as being born of *Elephantiack* Parents: Or elſe being conceived during the Flux of the Terms, being corrupted and declining to *Atra-bilis*: Or from a hot, dry, and malign Diſtemper of the Liver: Or from frequent eating of groſs, thick, over ſalt, ſowr and ſharp meats, perpetual Surſeits, in an Air over-hot and dry, or too thick and cloudy. § 6. This Diſeaſe is accompanied with Malignity, and as infectious (in its kind) as the Plague: whence it comes to paſs that in places where this Diſeaſe is moſt common, as in *Agypt*, *Spain*, *Africa*, *Italy*, *France*, and ſome parts of *Germany*, the Sick is by the Magiſtrates order, exiled from the Society of Humane Kind. For living and converſing with *Elephantiack* perſons, very much conduceth to the cauſing of this Diſeaſe. The Air is infected by the Stink of the Members, and the virious Exhalation of the Breath: for which

cause men ought to ſhun the company of perſons thus affected: and ſuch as are their Domeſticks ought not to converſe with them, but as neceſſity requires: for this cauſe, as theſe perſons are ſeparated from the Company of Mankind, ſo ought they to be ſent away and diſpoſed of in ſome other place, where they may live with moſt benefit to themſelves, and leſs danger to others. § 7. Conſideration with a Leprous Man or Woman is very dangerous and moſt infectious, yea although the Diſeaſe has been yet Recent upon them. It may alſo be cauſed from a ſuppreſſion of the Terms or Hemorrhoids, or the ſudden drying up of long continued Ulcers, which Humors being detained long in the Body, become worſe and worſe, and at length acquire this Malignity, which being retained in the Body, ſeats itſelf in the Veins, and ſo infects the whole Maſs of Blood. § 8. The Prognosticks. From what hath been ſaid, it appears, that this Diſeaſe is moſt grievous and dangerous, and hard to be Cured: and the truth is, not at all curable, if it be not taken in hand in the very beginning and firſt riſe thereof: nor can it then be overcome without much ado, and great difficulty. A confirmed and inveterate *Elephantiaſis*, is certainly incurable: for if a Cancer (being but in a particular place only) will admit of no Cure: how much leſs will an *Elephantiaſis*, receive any which is an Universal Cancer of the whole Body? moreover this Diſeaſe does more commonly

ly invade Men than Women; and among men, those whose Blood is thick, Viscous, and mixed with *Atra-bilis*. § 9. *The Cure.* First, lest the Diet be of such things as cool and moisten; gelly of Harts-Horn, and of Snakes and Vipers flesh is good Food: so also to eat their Flesh commonly, and to drink Viper Wine, strongly fortified with the Flesh, or Volatile Salt of Vipers: let his meats be of good juyce, easy of Digestion, rather Boyled than Roasted. Viper-Cider is good, and Chickens fed with flesh of Vipers or Snakes. He may eat Barly Cream, with Milk of Sweet Almonds; and let his constant Drink be either Cider or Viper Cider: Or Viper Wine mixed with Water; Or Prisan; Or Barly Broth Boyled with Fennel seeds; Or Hydromel, not of too strong a Body; Or *Decoctum Refragerans*, *Decoctum Fumarie*, *Decoctum Diureticum*, or *Aperitivum majus* (in Our Pharm. Lib. 4. Cap. 14. Sect. 12. 17. 19. 26.) Or this R^x Water lbvj. Sugar ℥vj. juyce of Limons ℥iij. Cinnamon ℥ij. let them gently ferment, and give it as ordinary Drink. § 10. Let him avoid all salt, smoak dried, old and hard meats; as also whatever is fried or spiced; Pease, Beans, Onions, Garlick, Mustard, Hares Flesh, Harts or Hinds-Flesh, Beef, Pork, Bacon, Fish, Old Cheefe, and generally all Meats that have a viscous and clammy juyce, or breed thick, melancholy and adust Humors. § 11. Avoid bleeding, for that may render the affect, which otherwise

might be overcome, incurable: you ought rather to increase Blood, than any ways to diminish it. § 12. Purge with Tincture of Sena in S.V. given in Fumitory Water: Or with Extract of Black Hellebor; Or Whey with Epithimum boyled therein; Or *Decoctum Catharticum Quercetani*, *Decoctum Fumarie Compositum*, *Decoctum Colocynthis*, Or *Aperitivum cum Rhabarbaro*; Or *Diacatholicon*, *Confectio Hamech*, and other things of like Nature: the last especially, if mixed with Hydrage, killed with Turpentine only, and so given. But the *Pilule mercuriales Herculis Saxoniae*; Or those of Hydrargyro from Horstius, are inferior to no other Medicaments: Now these preparers and purgers are often to be repeated, for so great and contumacious a Malady cannot be taken away by a Digestive or two, but with frequent and long continued Purgations, which, that you might a little delight Nature, you must often vary and change. § 13. In the mean season Cordial Medicaments and Antidotes, such as Extinguish and abolish Malignity, Venom, Poison and Contagion, are to be used: amongst which Our London Treacle has chief place, Volatile Salt of Vipers, Venice Treacle, Spirit and Salt of Harts-Horn, and of Mans Skull, Spirit of Guajacum, Bezoar Stone, Bezoar Animal, Tinctures of Antimony, Coral, or Salt of Tartar, Quintessence of Sows or Hogs-Lice, Confect of Alkermes, Vulgar, and of Our Prescription, Hares-Blood

Blood hot; but above all *Aurum Potabile*, as we have signified at *Señ. 17. § 1.* and not much inferior is the Specifick of Vitriol, there specified, *§ 14.* So soon as the Patient has taken any of these, let him go into a Bath of fair and sweet Conduit water, so temperately heated, as that you may be sure it may cause no Sweat, neither while he stays therein, nor when he comes out of it. This Bath of Sweet Water tempers the Dryness, discusses the Excrements, and loosens the Skin, which you may do well often to repeat. *§ 15.* After Bathing you may anoint the Body over with this Unguent. *R.* Juices of Night Shade and Scabious, Vinegar of Roses, *A.* *ʒi.* Roots of sharp pointed Dock, of Elecampane, of Pimpernel, Kinds of black Hellebor, tyed up in a Rag, *A.* *ʒss.* Oyl of Roses *ʒiiij.* boyl to the consumption of the juce: then cast away the Hellebor, and add fresh Butter *ʒi.* Vipers fat, or instead thereof Venice Treacle *ʒj.* Burnt Lead *ʒss.* Litharge Ceruse, *A.* *ʒij.* Frankincense, Storax Calamita, Niter, *A.* *ʒj.* mix them well with the Juyce of Limons, in a leaden Mortar, with a leaden Pestle. *§ 16.* Lastly, the *Añes* of the head of a Kite, and the Flesh of its Body, eaten a third part at a time in three days, is held for a Secret, so also is the Flesh of Pullets or Chickens, fed with Vipers Flesh, till they lose their Feathers and get new ones. And the Ancients gave the Flesh of these Vipers (casting away the Head, Tail and Skin) to be eaten, the Body being first purged of its gross Humors; for which

heads meet before, chiefly hauntpurpose also, you may have recourse to the Viper Pouder, and to the Volatile Salt of the same Animal.

XLVI. Alopecia, A Fox-like shedding of the Hair.

§ 1. This Disease causes the Hair to fall from certain parts of the Head, so as to leave bare and bald patches here and there; caused from evil Humors fretting and gnawing the Roots of the Hair. *§ 2.* It arises either from Flegm, Salt, adust and purrified, through the fault of the Brain: Or from eating of corrupt Meats, and such things as are venomous and poysonous, among which Galen accounteth Mushrooms: Or from the poyson of the French Disease. *§ 3.* This Disease brings not much danger with it, and whilst it is recent is easily cured: so also if the place being rubbed grows quickly red; Or, if the Extremities of the bald patches, begin to shoot forth hair afresh. If the Disease be inveterate, or the skin be thick, fattish, and wholly void of hair, the Cure will be difficult: and if the place being rubbed grows not red, the affect is incurable. *§ 4.* The Cure is the same with Ophiasis in the Section following.

XLVII. Ophiasis, A Serpent-like shedding of the Hair.

§ 1. It is so called from its Figure, because, that the bald and smooth parts destitute of Hair, are writhed like to a Serpent. *§ 2.* It begins on the hind part of the Head, exceed, not the breadth of two fingers creeps towards the Ears, with two Head, and in some as far as the Forehead, till the two
ing

ing Infants, and such as are young. § 3. *The Skin is superficially excoriated*, the color thereof changed, and if pricked, wheyish Blood issueth forth: the skin is also affected with whiteness, Scales and Dandruff. § 4. *The Causes and Prognosticks* are almost the same with the former, save in the *Ophiasis*, they are by some thought to be more great and dangerous, and so harder to Cure (though I think Experience says the contrary) *Allopecia* and *Ophiasis* are commonly curable if they follow *Porrigo* or *Tinea*, but if they proceed from the *Leprosy* (which they generally accompany) they are altogether incurable: if from the *Pox*, not till the Disease it self be removed. § 5. *These two Diseases Allopecia and Ophiasis*, are called in Authors by the general name of *Area*. § 6. *They are both cured as follows.* First, *Institute such a Dyet as may breed good Blood*, and prevent the encrease of bad humors, abstaining from plentiful Drinking of Wines, but especially from all French Wines. § 7. *Then let the Body be prepared and purged with fit Medicines*, according to the nature of the Humor peccant: and a particular evacuation of the Head by Apophlegmatisms, and solid Errhines at the Nostrills are exceeding good. § 8. *While the Disease is recent, and not confirmed*, both Galen and Avicenna advise to use Repellers; but otherwise, absolutely to abstain from them, and to use Digestives, which are of hot and thin parts, yet not greatly drying; with which you ought to mix

things cold and moist. § 9. *If there remains any Hairs that are corrupted*, they are to be pulled out with an Instrument called the *Volsella*, or with a *Dropacism*, such as we mention, *ad Porriginem*, in Our Doron, lib. 3. cap. 7. sect. . and at sect. 32. § 6. Then wash the Head with a *Ly*, wherein Maiden-Hair, Southern wood, and the like have been boyled: after use Frictions with coarse cloths, till the place is red, and lastly, apply proper Topicks. § 10. *Such like Medicaments are Mustard-seed, Creses, white Lilly Roots*, which (as it is affirmed) will restore Hair to places that have lost them by Burning or Scaldings. To these add, Rocket Seed, Niter, Oyl of Bays, Liquid Pitch, Sulphur, Poulder and Ashes of Southernwood, Roots of Sow-Bread, Hel-lebor, Seeds of Staves Acre, Doves-Dung. Add these also (which are the strongest of all) *Thapsia*, (by some called *Turbith*) and *Euphorbium*. § 11. *Now you must note*, That these Medicines now mentioned, are not to be used in all kinds of *Area*, or at all times, or in any manner, or to all ages; but unto each such as are fit and proper: for each Medicament hath its due time and manner of use. While the Disease is recent, use the weaker sort, so also to Children, Women, and soft and delicate Bodies: but if it be inveterate, or in such as are of full age, or in Men, and such as are of hard and strong Bodies, you may use the Stronger. § 12. Galen commends this: *Rx Ashes of the*
Greeks

Greek Reed ʒiſs. *Ashes of a Hedge-Hog* ʒj. *Mouſe Dung* ʒij. bruise and mix with *Vinegar*, and anoint therewith. Or, *R Reed Ashes*, *Goats-Hair burnt*, *Maiden-Hair*, *Bears Fat*, *liquid Pitch*, *Roſin of the Cedar*, *Ana*, mix them, this he calls the admirable Remedy. Or, *R Mice burnt*, *linnen Cloth burnt*, *Horſe Teeth burnt*, *Bears Fat*, *Marrow of a Hart*, *Reed Ashes* *Ana*, *Honey*, q. s. mix them. Or this which is the strongest of all. *R Euphorbium*, *Thapſia*, *Oyl of Bays*, A. ʒij. *Sulphur vive*, *Hel-lebor*, *White*, *Black*, A. ʒj. *Wax* ʒvj. softened with *Oyl of Bays*, *old Oyl*, or *Tar*, mix them, to be used, the Disease being inveterate. § 13. For Children and Women use this: *R Reed Roots burnt*, *Southernwood*, *Ana*, *Bears Fat*, or *old Oyl of Bays*, or *liquid Pitch*, enough to make an Oyntment. Or *R Southernwood*, *Ashes of Reed Roots*, *Frankincense*, *Ana*, *Bears Fat*, q. s. make an Oyntment. § 14. If you would have it stronger, add *Sulphur Vive*, *Bulls Gall*, *Rocket Seed*, *Niter*, or even *Thapſia* it self. *Bears-grease* helps by a secret property; of which, with the *Hairs of a Bear burnt*, *Oyl of the Maſtick Tree*, and the things before named, you may make an Oyntment.

XLVIII. Leonina, The Tet-tar.

§ 1. It is so called from the ruggedness of the Lyons Forehead, and is known by sight. § 2. It proceeds from a salt sharp and pituitous matter, misplaced; and sometimes from Choler. § 3. It quickly comes to the height, if it

once become inveterate, it is of very difficult Cure, especially if in the extrem parts, as the Hands of Legs, or Feet: the *Alopecia*, *Ophiasis* and *Leonina*, are commonly found all joyned together in *Elephantia* persons. § 4. In order to the Cure, anoint it with *Spittle*. 10. 15. or 20. times a day, and let it dry on; It is of great force. So also a *Lixivium* of *Quicklime*; Or *juyce of Plantane* mixed with *Beef Brine*; Or a *Solution of Sublimate* in water: Or *Aqua ad verrucas*, & ad delenda *Variolarum vestigia*, *Aqua Ophthalmica*, & *Ophthalmica nostra*, *Bulls Gall*, *Lac Virginis Schroderi*, *Liquor Mercurij vivi Myrsichti*, and his sugared *Liquor* (in Our *Pharm. Lib. 4. Cap. 11. Sect. 19. 20. 21. 24.*) are all very excellent things, provided that a good Dyer, and due evacuation has been made before hand.

XLIX. Elephantiasis Arabum, The Elephantick Disease of the Arabians.

§ 1. It is an irregular Tumor of the Feet, springing from Melancholick, Flegmatick Blood, and the Varices. § 2. By reason hereof, the shape and figure of the Foot is made almost like unto an Elephants Foot, and of an exceeding thickness, the Thighs are tumid, and much swoln, very red sometimes, sometimes wan and livid, and sometimes black, and sometimes full and abounding with Ulcers. The Tumor is oftentimes so great and irregular, that not only the form of the Foot is lost, but also all the Toes are so swallowed up and

hidden, as they can scarcely, and sometimes not at all be seen.

§ 3. *This kind of Disease you may often behold in Beggars by the High-way, who get their liveli-*

hood, by begging in those publick and common places. § 4. It is difficultly cured, without a long and continual course of Physick,

and if once it becomes inveterate, it is for the most part incurable, because that from all parts of the Body, a great abundance of humors are thrust forth thither.

§ 5. *The Cure is don by a long and continued evacuation of the morbid matter, with those things which we have before-mentioned in the cure of the Lepra Græcorum, and the Elephantiasis aforesaid: for unless those vitious Humours, be oftentimes evacuated, and emptied forth of the Body, and the evill disposition of the Bowels (from whence those Humors are supplied) be corrected and amended, there can be no hopes of a Cure.*

§ 6. *The sum therefore of the Cure, consists in a continual and long course of Physick, and a perpetual evacuation of the diseasy matter; during the doing of which, the growth and increase of the Tumor is to be prevented by astringent and drying Medicaments; and that which is already in being to be dissolved by strong Resolvers; such as are made of Camomil, Flower-de-luce Roots, round Bithwort, Wall Flowers, Ammoniacum, Bdellium, Galbanum, Opopanax, Sagapenum, and the like. Amongst Compounds, Forrestus his Cerot of Ammoniacum; Mynsicht his Empl. Galbani*

crocatum; Vigo his Empl. de Ranis with a four fold quantity of Mercury: To which add, a plate of Lead, besmeared with Quick-silver.

APPENDIX. III.

Concerning Diseases of the Hair.

L. *Destluvium, The Falling of the Hair.*

§ 1. *We intend not here Baldness, but such a falling of the Hair; wherein all or most of the Hairs fall off here and there in several places.*

§ 2. *It is caused either from defect of nourishment, in persons having a Consumption, or such as are Sick of a malignant Feaver: Or else from the Pravity of humors, which eat and corrode the Roots of the Hair: Or lastly from the rarity of the skin.*

§ 3. *In consumptive people it is without cure: In the other Cases there is some hopes.*

§ 4. *Where you suppose it curable, you must frequently rub the head, that the nourishment may be brought thither. If it be from pravity of humours, (universal remedies being premised,) you must gently discuss: Labdanum mixed with Oyl of bitter Almonds is good: If it be from the rarity of the Skin, use Labdanum dissolved in Oyl of Mastick and Myrtles, and anoint therewith: the remaining part of the Cure you must search out of the following Section, and out of Sect. 47. § 6, 7, 8, 9, 10, 11, 12, 13 and 14 aforegoing.*

LI. *Calvities, Baldness.*

§ 1. *It is when the Hairs fall wholly off*

off the Head, chiefly the fore part, leaving the skin smooth. § 2. It arises from defect of Aliment, dryness of the Brain, either through Age, or some violent cause, as Poyson, Burning, Scalding, too much use of Carnal Embracements. § 3. It is oftentimes without remedy; yet we have known it sometimes cured; and it may by Art be very much prevented: But that which is through extrem Age, Burning or Scalding is incurable. § 4. Out of what we have said at sect. 47. § 6, 7, 8, &c. the Cure of the Disease (if it may be cured) may be found out; yet we thought good to add in this place, the few things following. § 5. First let universal remedies be premised, then order a good Diet, in which Biting, Salt, and astringent things ought to be avoided. § 6. Supply the Nutriment, by such things as correct the dryness of the Brain, and attract moisture to the Roots of the Hair, in which Case Moderate Frictions are good for this purpose, apply some of these Attractives at sect. 47. You may rub the place till it is red with an Onion, and apply after a Cataplasm of Onions and Mustard Seed. Labdanum mixed with proper Oynments is excellent: so also is the Gum alone: Or dissolved in Oyl of Mastick, or Bears grease. § 7. You may foment the Head with a Decoction of Fænugreek, or Burdock Roots, made with a Lixivium of Tartar; and often wash the part with Aqua Mellis. Labdanum is a Specifick in this Case, and very fitly to be ad-

ministr'd in every Falling off of the Hair, being dissolved in Wine or some proper Oyl. Locations also of Labdanum, in a Decoction of Maiden-hair, Golden Maiden Hair, Southernwood, Mastick, Roses, Rosemary, and Sage, are of great Use. § 8. The things following, not only take away the cause of shedding hair, but help to generate and breed it, by a peculiar faculty: viz. all the Capillary Herbs; Southernwood, Reed root, Dock root, root of great Burr, Alarabacca, Labdanum, Hony, the Pouder or Ashes of Bees, Wasps, Flies, Moles, Mice, Mice dung, Hedge-Hogs, Bears fat, Vipers and Serpents fat, down of Quinces, Ashes of Cotton and Hair, Aqua Mellis, Juycce of Onions. § 9. Of all which you may form Oyls, Balsams, Liniments, Oynments and Emplasters at pleasure; as, R Oyl of Southernwood ℥ij: Ashes of Bees or Wasps ℥j. Mouse Turds ℥j. Honey, Labdanum, A. ℥v. Bears fat, enough to make a Liniment.

LII. Plica; Plica Polonica, Else-locks, or matted Hair.

§ 1. It is a tangling and folding of the Hair into Else locks, where in the Hair is as it were folded and matted together in Bunches, or into one long lock. § 2. It is known by the Bunching and Complications of the Hair, pains vexing the Joints and Bones, Convulsions, plenty of Lice; Roughness and Scaliness of the Nails of the great Toes, growing black, and like a Goat bucks-horn. § 3. The cause cannot sufficiently be explained, yet is thought to arise from plenty of

matter flourishing the Hair ; but such as is hurtful to the Body, thereby causing divers Symptoms : If the Hair is Shaven, it sheds Blood : whence it is supposed the Malignity is conveyed to them by the Blood. § 4. *Authors say, It arises from a peculiar Corruption of the place, Air, and Water.* § 5. *If it be without pains, there is hopes of a Cure ; for so Excrementitious humors are thrust forth into the Hairs, and the Faculties become stronger.* Otherwise, seeing the Causes are not perfectly known, no perfect Cure can be expected ; for the Disease seems to be a Complication of the Gout, Rheumatism, Cachexy, Hypochondriack Melancholy, and the Scurvy, joyned with a kind of Malignity. § 6. *The Cure cannot be attempted by cutting off the Lock, or by keeping it from Tangling, for then the party is pained, sick, or becomes Blind, and as it were at Deaths door, nor can have any ease, till it is either grown or tangled again.* § 7. *Nor can it be attempted by bleeding or purging ; for thereby it is made so much the worse, and to rage so much the more ; for that Purgation is not able to overcome and Master the Noxious humour, but to add Torment to the Sick beyond Imagination.* § 8. *In this Case therefore, it will be good to follow Experience as our Guide : and rather to help forward the matter to the place where it is intended, viz. to the Hair, which is well done by a Lotion made of Bears brecch,*

which is very available and successful. Some have been cured by often Bathing, and manifold fomentation, wherein Bears brecch aforesaid has been decocted, (viz. the dried leaves in such a quantity of Water, that the Decoction may be of a Yellow not of a purple color : which decoction has also been drank inwardly, after it has been fermented with Sowr leaven, and the dried Herb infused also in the same. § 9. *If this prevails not, you must keep the body soluble by cooling and moistning Clysters, and frequently give Alexipharmica, such as are exhibited in the Scurvy and Gout : Sudorificks also now and then to be used are good, because they help nature in expelling the matter to the place appointed.* § 10. *But whereas the Purges used by the Ancients prevailed nothing in this Case, yet those that are more Spiritual I have known to do good ; and by the taking of this Tincture following every other day for a hundred days together, I once knew a stubborn Plica Cured.* *℞ Choise Sena ʒx. powder of Gallap ʒiv. Infuse all in S.V. ℥viii. for thirty days, of all which give every other or third day three or four Spoonfulls. If you make the Tincture in Aniseed Water, it will be yet better. And I knew a certain Emperick, one Moret, to Cure another by fluxing with the Ptilula Mercuriales Herculis Saxonie ; he having first for sometime used the fomentation of the aforesaid Decoction of Bears brecch, and*

caused it also to be drunk as ordinary drink : at last he cut off

the Lock, and the Patient remained well.

CHAP. XXV. Of WOUNDS.

I. Of the Method of Curing in General.

I. Take away those things which may hinder consolidation (as Hairs, Bones, Splinters, Thorns, Bullets, &c.) then Compose the disjoyned parts, putting the Veins and Nerves in their right order and places, which keep so by Ligature, Suture, or such other convenient means ; then stay the Flux of Blood, (if any be) with the *Pulvis Astringens* in *Our Doron. lib. 2. cap. 21. sect.* making a Pledget of Tow, dipt in the White of an Egg well beaten, and strewed over with the Pouder, which lay on the Wound, and then roul it up.

II. If the Wound be slight, or without loss of substance, close it as soon as may be, and dress it not till the next day ; but if the flux of Blood be great, open it not till two or three days be past ; and if there be the hurt of any Vessels, as of an Artery, the best way will be to cut it in two, and cauterize both ends with a cauterizing Buttrōn, or else take it up and tye it, and then cauterize it ; if the Bone be bare or

shattered, apply not any unctious or greasie thing near it, but wash it with Spirit of Wine, and Syrup of the Juyces very hot, either by injection, or tents untill digestion ; in the Spirit you may dissolve a little Myrrh and Storax.

III. Afterwards use *Balsamum Catholicum*, & *Arcaei*, keeping upon it the *Emplaster de Meliloto*.

IV. If the Wound be in the Head, with fracture of the Skull, next the Skull lay a Pledget of dry lint, then another dipt in the liniment of *Arcaeus* hot, over that another dry Pledget, (that the Skull may close before the Wound) and over all these, the Plaster of Melilot, or that of *Paracelsus*.

V. If it be Gun-shot, and in a fleshy place, at the second dressing dip tents in *Oleo Catellorum*, & *Hyperici, A.* and apply them. But if it be a nervous part, or the bone be splintred, mingle Spirit of Wine, and *Syrupus Succorum, A.* and use it warm till perfect digestion, (the which also you may do in Wounds of the Head) then use the Balsam of *Arcaeus & Basilicon*, mixed to cleanse, applying them very warm.

VI. Make

VI. Make not your tents either too long, or too thick, lest the part be pained; and you stop the Janies from coming forth; when you pull the tent forth, if there be bloody matter at the end, shorten the tents, till the wound is filled up, applying over the Emplaster Diacalceos.

VII. In stitching a Wound, set not the stitches too thick, but setting the stitching quill to one side, with the needle filled with oyled Silk, pierce the skin on both sides the Wound, not taking too much hold, (because of pain) nor too little, (lest it breaks out before consolidation) then tye the Silk (drawing the Lips pretty close) with a slipping knot, and cut off the ends; then an inch from that make such another stitch, continuing till all is joyned.

VIII. In dressing the Wound, have all things in a readines, let your Instruments, Plasters, Tents, Pledgets, Boulsters, Roulers, and Probe armed in the eye with fine lint, to cleanse the Wound from its Janies) be orderly laid in a fair platter; warm the Unguents in the Uvula Spoon, and dipt in the tents all save the Head.

IX. If the Wounds be dressed with pledgets, fill it up one pledget upon another, till it is even with the member, then lay on the Plaster, then a Boulster of fine Cloath thrice doubled, and then roul it up; which you need not open nor dress but once in twenty four hours, except new matter requires it.

X. In Wounds of the Head, have away the Hair, and take away the Hair, and take away what

may offend; if the Skull is depressed, raise it gently with the Levatory; but if it cannot be done gently, let it alone two or three days, then try again, (if nature hath not raised it of it self, as sometimes it doth) next stop the flux of Blood, and roul it up for two days, giving if the body be bound) this Clyster in the Afternoon. ℞ Milk boyled with Aniseeds ℥j. Honey ℥ij. Butter ℥ij. Species Cathartica ℥ij. Salt ℥ij. letting him eat thin Broth, and drink ordinary Beer.

XI. But if there be a Contusion without a Wound, causing a tumor, then dilate it (that the confused Blood may come forth without delay; and in fractures of the skull, be sure to take out all splinters of Bones, that may lye upon the membranes which cover the Brain, and at every dressing, with a little Sponge take out the Blood or matter which may at any time fall upon them, keeping coals near the wound all the time of dressing; giving the sick if they be weak or Feaverish (now and then) gut. x. or xv. of the Elixir proprietatis, in Spiritu Cardiaco.

XII. In burnings and scaldings, you must first take out the fire, by applying Mel Saponis, Balsamum Saturni, Oleum Anodynum, Unguentum Rubrum vel Populeon, or things of like nature, and then healing, as in an ordinary Ulcer.

XIII. Wounds made by the biting of venomous Beasts, ought first to be washed and cleansed with Oxymel, Vineger, Salt, or Brine, with a little Honey, applying over a

strong drawing Plaster mixed with our *Theriaca minor*; and then heal them as other Ulcers: giving mean season Bezoar Mineral gr. xvi. in *Tinctura Diaphoretica* Paracelsi, making the sick sweat well upon it; and often afterwards adhibitting ʒss. of our *Theriaca minor* alone, or instead thereof our *Trochisci Alexiterii*.

XIV. Now you must know that the general intentions in Curing a'l manner of Wounds are four; first, to preserve the strength and heat of the wounded part; secondly, to remove the symptoms; thirdly, to cleanse the Wound perfectly of all extraneous things, or what might hinder its healing; fourthly, to joyn together, and so to keep the gaping lips of the Wound to the consummation of the Cure.

XV. The natural strength and native heat of the hurt part is preserved, 1. By a fit dyet. 2. By a warm and temperate Air. 3. By proper applications.

§ 1. Art, it is that removes the Impediments of Cure, but it is Nature her self that Cures the Disease.

§ 2. Therefore in this case you must fit a Dyet to the sick, which must not absolutely agree with the Humor abounding (unless where the food is of easy Digestion) nor yet be absolutely opposite thereto. § 3. Secondly, you must respect the Blood, because that it serves to unite the Wound: if it be vitiated, you must correct it by purging: if it flows in too great a quantity, you must apply Astringents and Repercussives, and if need yet require, use derivation: if it flows in too small a quantity,

you must use gentle frictions, and embrocations, indifferently hot, provoke Sweat, and exhibit nourishing food and Medicines. § 4. The part must be comforted by Externals, which, what they are, we shall in what follows more particularly declare.

XVI. The Symptoms of Wounds are chiefly these. 1. A Fever. 2. Inflammation. 3. An Erysipelas. 4. Hemorrhage. 5. Vehement Pain. 6. Convulsion. 7. Proud Flesh. 8. Gangreen and Sphacelus or dead Flesh: all which, as they may accidentally happen (sometimes one Symptome, sometimes more) in any Wound, are particularly to be remedyed, before the hopes of Cure can be expected.

XVII. The Fever is to be repressed with Antifebriciticks, gentle Coolers, Cordials and such things as by a specifick property extinguish all præternatural heat, and provoke sweat: among which are species Diamargarit. Frigidi: pulvis exchelis crancrorum, *Tinctura Diaphoretica* Paracelsi, vel Tartari, Lapis Prunellæ, syrupus Cardiacus de cinnamomo, Acetositis Citriorum, & Corallis Compositus, Julepum Alexandrinum & Rosatum with Aqua Cinnamomi Mathioli, Aqua Cælestis, and other things of like nature.

XVIII. The Inflammation is taken away by application of proper Discussives, mixt with Anodynes; as, R. Oyl of Roses, Oyl of Camomil and Oyl of Dill A. ʒj. Honey, yolks of Eggs, A. ʒij. Barly and Wheat Flower, A. ʒiij. mix and apply it: See Sect. I. Cap. 22. foregoing.

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XIX. *The Erysipelas, you must remove by the directions in Cap. 22. Sect. 6. Or by this Fomentation.* R Broth of Pease or Beans lbij. Myrrh in powder ʒiſs. Saccharum Saturni, Lapis prunella A. ʒij. Spirit of Wine ʒviij. mix and foment therewith warm, or dip linnen cloth therein, and apply them warm to the part, often renewing the same if dry or cold.

XX. *The Hemorrhage ought specially to be considered, for that not only impedes the Cure, (but if great) may deprive both of strength and Life.* It is to be stoppt as soon as possible, which in the greater Vessels, especially the Arteries is very hard to do; for which cause sake, those Wounds are for the most part Mortal, since such things as stop blood are too weak, and hard binding often occasions a Gangreen.

§ 1. *In case therefore that the greater Vessels be hurt, it is the Opinion of the most able Chyrurgians, that the Actual Cautey is the best and surer way; the lesser Vessels will close of themselves.* § 2. *Some close the Wounds of the Vessels with their Fingers, and so hold them while the Blood is Coagulated, but this seldom well succeeds.* § 3. *But the best way is by a compress upon Vessels, by a pledge made with whites of Eggs, and some Astringent powder, wiping away the Blood with a sponge.* § 4. *You may also sprinkle pulvis Astringens (not over the whole Wound, as some use to do, but only upon the Vessels, and then bind up the Wound, as aforesaid, continu-*

ing the use of the Astringents, till the danger of an Hemorrhage is perfectly over. § 5. *As to the bandage it will be best done with Roulers, beginning below the Wound, and at the Wound, binding it three or four times about; and not undoing it, to the third or fourth day, if you fear bleeding.* § 6. *Such things as stop Blood, are roots of Bistart, Cink-foyl, Comfrey, Tormentil, Gentian; leaves of Hounds-Tonge, Knot-Grass, Horse-tail, Plantane, Perwinkle, Nettles, Burnet, Red Sanders, Pomgranate Rinds and Flowers, Chalk, Burnt Alum, Ashes of Old Hats, Talk, Crabs calcined, Red Coral, Blood-stone, Load-stone, fine Bole, Crude Virriol, Burnt Virriol, Mastick, Acacia, Sanguis Draconis, Aloes, Amber, Sarcocol, Olibanum, Whites of Eggs, Hairs of a Hare, Os Sepiæ, Cobwebs, Mummy. Of these there are several Compounds to be found, both in Our Dispensatory, and Doron, or Supplement to the said Book, now in the Press.*

XXI. *The pain is of necessity to be eased, because it creates watchings, dejects the Spirits, and is a cause as well of a Flux of Humors, as of Inflammation, Feaver, and Gangreen; and this is done generally with Anodynes.*

§ 1. *You are first to enquire into the Cause thereof; if it be from sharp Medicines, or from things too hot, they are presently to be taken away.* § 2. *If any foreign or Heterogene matter remaining in the Wound be the Cause, you must draw it forth.* § 3. *If it*

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comes from the choaking in of the Pus or Filth, you must give it a free passage; and in this case some have used hollow Tents. § 4. If it be from an Inflammation, you must remedy it by Sect. 18. a foregoing; or apply Oyls of Linseed, Roses, Camomil, Worms, Poppies, &c. as R Oyls of Roses, Poppy seeds, and of Camomil A. ʒj. Camphir ʒj. Saffron ʒj White of one Egg, mix them. § 5. In this case also Ung. Populneum, Dialthæa, Saccharum Saturni and Lapis Brunella are good; if it be vehement, you may use Narcoticks, but with caution. § 6. If the pain cease not with these or the like Medicines, you may conclude some Nerve is wounded or hurt by consent, whose Cure we shall hereafter in some of the following Sections declare.

XXII. Convulsions or Spasms, shew the malignity of the Humor; Or the depraved habit of the Body; Or the ill constitution of the Nerves, all which foreshew evil, and the length of the Cure.

§ 1. In this case you ought to use Internals, such as are proposed Cap. 29. Sect. 12. following: Oleum Lavendule Stillaticum, given in a few drops, first mixt with Sugar; and then with water of Lillyes of the Vally or Rosemary water, is inferior to very few things; and the next that takes place is Adeps Rosarum. § 2. Outwardly you may use Balsam of Peru, Goose Grease, fat of a Fox, Ram, Castor, Mans-Grease, Hore-dung, Oyls of Juniper, Lavender, Amber, Turpentine, Rue, Marjoram, Worms, Castor,

Orrice, Bays, Oleum, Philosophorum, Petroleum, Oynments of Agrippa, Arragon, Martianum, Nervorum, Excelsense, Spirit of Wine, Balsamum Nervinum Schroderi, Balsamum Spasmodicum Mynsichri, which two last are inferior to no other.

XXIII. Hyperfarcosis; Proud Flesh, Or a too great increase of Flesh; which if it comes from too much Blood, the flesh is solid and well conditioned: if from the quality of the Medicine, it is spongy, and like that as when the bone underneath is rotten.

§ 1. In the first case abstinence may be convenient, with the use of strong drying Medicines, giving now and then a few drops of Spirit of Sal Armoniack inwardly, in a glass of Sack. § 2. In the other case, you will find deterfive and corrosive Medicaments to be of good use; for they take away the substance of the Flesh. § 3. Such Medicaments are chiefly Burnt Alum, burnt Spunges, Galls, Aloes, Turry, Verdigrise, white Vitriol, burnt Vitriol, Præcipitate, Arsenick: Or this water, R Crude Alum, Verdigrise, A. ʒij. Rhenish Wine ʒxviij. boyl to the consumption of a fourth part; strain and add Camphir ʒj. dissolved in S.V. ʒj. Or this Pouder: R Galls, Balauustins, Burnt Alum, Frankincense, Myrrb, A. ʒj. Sanguis Draconis, Ceruse, Verdigrise, A. ʒss. make a Pouder.

XXIV. Gangreen and Sphacelus, as they are dangerous symptoms, so ought they as speedily to be looked to; and with substantial Medicaments. We commend

mend a Fomentation made with Spirit of Wine, with which Spirit or Flowers of Sal Armoniack are mixed: the remaining part of the Cure, you may seek out in its proper place. *Cap. 22. sect. 4. aforegoing.*

XXV. Fainting and Swoonings are of very evil consequence, for which we commend to you *Spiritus Angelicæ magis compositus*, mixt with Mint or Rose water, or instead thereof *Aqua Mirabilis, Aqua Cælestis*, in which Confectio Alkermes of Our prescription is dissolved.

XXVI. The drawing forth of Extraneous things out of the Wound.

§ 1. You ought not to close the lips of the Wound, nor to endeavour Conglutination, till all forraign matters, or whatsoever hurts the Wound is taken away; for otherwise, after a little time it will break out again. § 2. Coagulated Blood ought to be squeezed out, or washt out by a Syringe with generous Wine, or wiped away with a Sponge, according as the form of the Wound will admit: for so as there will be less matter, so will there be fewer Symptoms: But in an Hæmorrhage this Rule is not to be observed. § 3. Hairs, Sand, or other filth are to be removed and washt away, with warm Wine mixed with Spirit of Wine. § 4. As for the manual Extraction of Splinters, Thorns, Arrows, Bullets, or such like things, we have fully and plainly taught the same, *Cap. 16. Sect. 12. aforegoing*: But before the Artist goes about to Extract them, he ought to consider the

hopes of his Patients life, least if he dye under the Operation, or suddenly after, he should undergo scandal for the Death of the Sick. § 5. Broken Bones if loose are to be taken away the first dressing, except an Hæmorrhage hinder: otherwise if they stick fast, you are to wait Natures time, to see whether they will re-unite or separate. § 6. If the Bullets, Arrows, Splinters of Wood, &c. cannot be got forth with Instruments, you must then endeavour their expulsion by strong Attractives. § 7. Such are Roots of Aron, Aristolochia, Imperatoria, Bastard Dittany, Radishes, Valerian; leaves of Southernwood, Pimpernel, Anemone, red Beer, Dittany; Gums Ammoniacum, Galbanum, Sagapenum, Opoponax, Succinum, Pitch; brains and fat of a Hare, Crabs Flesh, a live Mouse cut in two; common Flyes, Earth-Worms, burnt Frogs, Goose-Dung, Pidgeons Dung, Leaven, Soap, Loadstone, Plaster Opodeldoch. Or this: R round Birthwort, Dittany of Creet, A. ʒij. yellow Amber, Pidgeons Dung, Oyl of Bays, A. ʒij. Pine Rosin, Colophony, A. ʒvj. Ammoniacum, Opoponax, A. ʒviij. Crown Sope ʒx. Turpentine and Pitch, enough to make it into a Plaister.

XXVII. The way of Closing the lips of the Wound.

§. This is done either by Ligation or stitching. § 2. Ligation is made in wounds, according to the length of the part, and not deep, which is to be neither too loose nor too hard, but of that breadth which may comprehend the whole

Wound: if it be a long Wound, let the Rowler be about three fingers broad; and laying the midst of it upon the Wound, rowl the one part upwards and the other downwards. § 3. *If it be too loose it will not keep the Lips of the wound together: if it be too straight, it may cause an Inflammation or a Gangreen.* § 4. *In Winter the Rowlers ought to be longer than in Summer, and if the Wounds be very great, you must use Boulsters besides your Rowlers.* § 5. *Stitching is done either by a Needle, or a sticking Medicine.* § 5. *Let the Needle be three square, with a waxed thread: pass it through the skin, as also part of the subjacent flesh (having a care that you prick no Tendon:) let your stitches be neither too many nor too few, but made at such a distance as to draw the skin so together, that the lips of the Wound may touch and joyn, leaving a little part for the putting in of a Tent, to give way to the Pus or matter.* § 7. *In little wounds, these Tents will be unnecessary; and in Great, they ought to touch neither Nerve or Tendon, nor yet reach to the bottom of the Wound: by these means the sick will be freed from pain, the Wound from Inflammation, and the Artist from many inconveniences.* § 8. *Where Ligature will not be sufficient, and the Needle is not convenient, a sticking Medicament is most necessary, and this is made either by the dry stitch, or the sticking Emplaster.* § 9. *The dry stitch is when pieces of cloth are dip't in Ung. Glutinofum and apply'd: this is most safe*

and painless, and may be used in all Wounds, yea although other stitching be also needful, for this keeps that from breaking out, which sometimes it is very apt to do, the pieces of Cloth are to be indented and applied four hours before stitched. It is of great use in tender and delicate persons, and in Wounds of the Face. § 10. *Unguentum Glutinofum. R Sarcocol; Mastick, Dragons Blood, Frankincense, A. 3j. make a fine powder, which mix with so much glair of whites of Eggs, as may make it of the thickness of Honey: Or this Emplaster. R Diapalma, Burgundy Pitch, A. mix them.* § 11. *The sticking Emplaster mentioned at Sect. 8. above. R Sarcocol, Fine Bole, Mastick, Dragons Blood, Pine Rosin, A. 3j. Tacamahac ʒijss. slip Pitch. q. s. mix and make a Plaster, by melting them together.* § 12. *In the naked stitch at § 6. above, it is sometimes necessary to leave the needles in, in every stitch, which is of use in Hair-Lips, and other like Wounds.*

XXVIII. *The next thing which we are to consider is the Medicaments most necessary for the Cure of Wounds, which are of three kinds, viz. First, digestives which are for the more perfect maturing and well disposing the matter: Secondly, Sarcoticks, which are for the generating of Flesh: Thirdly, Epuloticks, which are Medicines producing the Cicatrice or skin.*

XXIX. *The most usual Vulneraries in General Sennertus has named in this Order. Roots of the Greater Consoud, Bistort,*

Tor-

Tormentil; leaves of Ladies Mantle, Sheppards Purse, Golden Rod, Balsam Apple, Vervain, Speedwel, Hypericon, Yarrow, Sanicle, Horte-tail, Elm, Plantane, Betony, Cypress, Mouse-ear, Flowers of Red Roses, Hypericon, Pomgranates; Cypress Nuts; Frankincense, Aloes, Mastick, Tears of the Firr-Tree, Rosin, Pine Rosin, Turpentine, Larch Rosin, dry Pitch, Liquor of Elm Leaves, Gum Elemni of Juniper, of Ivy, Tragacanth, Tacamahacca, Caranna, Sarcocol, Dragons Blood; sealed Earth, Fine Bole; bark of the Frankincense Tree; Lapis Hæmatites, Coral. Of all which you may make Compound Oyls, Balsams, Liniments, Unguents and Emplasters, at pleasure, and the chief of all which, is that of *Franciscus Arcæus*, which in its proper place we have described. See Our *Pharm. Lib. 5. Cap. 4. Sect. 5.* and our *Doron Lib. 3. Cap. 4.*

XXX. The most usual Digestives.

Oyl Olive, Oyl of Roses, fresh Butter, May Butter, Oyl of Mastick: Gums, as Elemny, Turpentine, Frankincense, Mastick, Olibanum, Flower of Wheat, Barly, Pease, Beans, Fænugreek, Honey, yolks of Eggs, Balsam of Sugar, Basilicon, both greater and lesser.

Among Compounds you have these: § 1. R. Rosin, Wax, Turpentine, Oyl of Roses, A. ʒij. Frankincense, Mastick, Myrrh, A. ʒij. make an Unguent. § 2. R. Turpentine ʒij. white Rosin, Olibanum, Colophony, A. ʒij. Mastick ʒj. Saffron ʒj. Wax lbj. Oyl lbj.

mix and make an Oynment. § 3. R. Oyl ʒij. yellow Wax ʒ ss. Frankincense, Mastick, A. ʒj. Yolks of Eggs, No. j. fresh Butter, q. s. make an Oynment. § 4. R. Juices of Ladies Mantle, of Sanicle, of Saracens Consound, A. Old Hogs Grease, May Butter, A. q. s. make an Oynment. § 5. The Unguent of Cæsar Magatus. R. Oyl of Hypericon lbj. Wax ʒij. Balsamum Magati, lbj. Gum Elemi ʒij. Balsam of Peru, Tacamahacca, Caranna, A. ʒij. (dissolve all these Gums severally and apart in Oyl of Hypericon) Ammoniacum, Galbanum (in like manner dissolved) A. ʒj. Myrrh, Frankincense, Aloes, Gum Ivy, A. ʒij. Roots of Consound, Birthwort, Bistort, Tormentil, A. ʒj. Cretian Dittany ʒij. Scordium ʒij. Mans grease ʒij. Swans Grease ʒj. mix and make an Oynment, which keep in a narrow mouthed Vessel to cork up. § 6. A Balsam. R. Oyl of Bays ʒij. Mastick, Olibanum, Goats Suet, A. ʒj. mix them. § 7. Another Balsam. R. Oyl of Hypericon, Turpentine, Gum Elemi, Wax, Rosin, Ship Pitch, Frankincense, A. lbj. Oyl of Wax, Oyl of Anniseed, Oyl of Myrrh, Galbanum, Pine Rosin, A. ʒiv. mix and make a Balsam: this is inferiour to none of them.

XXXI. The most usual Sarcoticks, or flesh breeders. Roots of Birthwort, Consound, Comfrey, Orrice, Sanicle; Leaves of Betony, Centory, Consound, Hypericon, Melilot, Burnet, Plantane, Scabious, Scordium, Vervain; Seeds of Line, Fænugreek, Beans; fine Bole,

Bole, Sealed Earth; Gums of Elemy, Pine, Labdanum, Frankincense, Olibanum, Aloes, Colophony, Mastich, Myrrh, Dragons Blood, Sarcocol, Turpentine, Tragacanth, Wax, Honey, Mummy; Ceruse, Litharge; Burnt Lead, Pompholix; Lapis Calaminaris, Hematites, Cadmia; Oyls of Hypericon, Bays, Mastich, Myrrh; Unguentum Aureum, Basilicon, Fuscum Wurtziz, Diapompholigos; Empl. Sticlicum Crolliz & Paracelsi, Oppodeldoch, de Betonica, Diasulphuris Rulandi; Balsam of Peru, of Tolu, of Crollius, of Magarus; Mans fat, Goats, Foxes, Goose and Bears fat. Among particular compounds these.

§ 1. A Balsam for Wounds of the Nerves. R Turpentine lbij. Oyl lbij. Oyl of Bays 3vj. Oyl of Euphorbium, of Cloves and of Bayberries; Gum Hederae, Ammoniacum, Sagipenum, Opoponax, Galbanum, A. 3j. Frankincense, Mastick, A. 3ij. mix all together and Distill an Oyl by a Retort. § 2. For Wounds of the Nerves, Bones and Veins. R Turpentine lbij. Linseed Oyl lbj. Pine Rosin 3vj. Frankincense, Myrrh, Aloes, Mastich, Sarcocol, A. 3iiij. Mace, Xyloaloes, A. 3ij. Saffron 3ss. Distill in a Retort with a gentle fire, so have you a clear Water and a reddish Oyl, but augment the fire by degrees to the end of the Distillation: Separate the Oyl and Water. This Oyl consolidates speedily and without pain. § 3. Another for the same. R Turpentine lb ss. Galbanum, Elemi, Ivy, Frankincense, Mastich, Myrrh, A. 3j. Aloes, Xy-

loaloes, Galanga, Cloves, Cinnamon, Nutmegs, Cubebs, A. 3ss. S.V. a sufficient quantity: Infuse 24 hours, then distill in a Copper Vesica. § 4. A Vulnerary Oyl. R Turpentine, Oyl of Bays, A. 3iv. Oyl of Eggs, 3ij. Oyl of Roses 3vj. digest in the Sun, till they have a yellowish colour. § 5. A Vulnerary Balsam. R Oyl of Roses 3viiij. of Bays 3j. Oyl of Turpentine 3ss. Oyl of Spike, and of Juniper berries, A. 3j Pine Rosin, Turpentine, Colophony, Mastick, A. 3ss. white Calcanthum 3j ss. mix, boyl a little, and strain it out for use. § 6. Another for the same. R Fl. Sulphuris 3iiij. Oyl of Myrrh 3iiij. Camphir 3j. Turpentine 3v. Distill and keep the Oyl for use. § 7. The Oyl of Hispana so called. R old Oyl lbiv. Oyl of Turpentine lbij. Malmsey lbij. Frankincense lbj. Valerian, Hypericon, Carduus, A. lbss. Cutchinele, Pine Rosin, Myrrh, A. 3iv. bruise the Herbs, and digest them in the Wine 24 hours; then mix the other things, boyl to the Consumption of the humidity, strain and make an Oyl S.A. § 8. An Incarnative Emplaster. R round birthwort roots, of Comfrey, A. 3ss. Mummy, Colophony, Aloes, Mastich, Sanguis Draconis, Litharge of Gold, Tutia, A. 3ij. Gum Elemi 3ij. Turpentine, q. s. make an Emplaster. § 9. Another for the same. R Wax, Rosin, Pitch, Vitriol, Olibanum, A. 3iiij. Turpentine 3vj. red Myrrh, Oyl of Juniper, Oyl of Eggs A. 3j. Camphir 3i β. Oyl of Roses q. s. make an Emplaster. § 10. An Emplaster for a Wound Old or New. R Wax 3xx. Old Oyl 3xviij. Litharge of Gold

Gold \mathfrak{z} xij. Ammoniacum \mathfrak{z} ij β . Bdellium, Olibanum, A. \mathfrak{z} ij. Loadstone \mathfrak{z} ij. Galbanum, Opoponax, Myrrh, Mastich, A. \mathfrak{z} j β . Verdigrise, long Birthwort roots, A. \mathfrak{z} j. Lapis Calaminaris, Tutia A. \mathfrak{z} β , dissolve the Gums in Vinegar, powder the rest; mix and make a Plaster S. A. § 11. Another for the same: \mathfrak{R} Wax, Rosin, A. lbj. Goats-Suet, Hogs grease, Turpentine, A. \mathfrak{z} iv. Vinegar \mathfrak{z} ij. mix and make an Emplaster. § 12. An Emplaster for a puncture or pricking. \mathfrak{R} Oyl, Rosin, Bears fat, Goats and Bulls Suet, A. \mathfrak{z} ij. fat of Cow heels, \mathfrak{z} ij β . May Butter, \mathfrak{z} vj. Litharge of Silver \mathfrak{z} xij. Scales of Brass, Mastich, A. \mathfrak{z} j β . new Wax or Oyl of the same \mathfrak{z} iv. mix and make a Plaster according to Art.

XXXII. The most usual Epu-
loticks or Cicatricers. Roots of
Avens, Comfry, Tormentil,
leaves of Mugwort, Hypericon,
Speedwell, Mullein, Plantane,
Sanicle, Fluellin, Betony, Yar-
row, red Roses, Balaustins,
Sanders white, red, yellow, Xy-
loaloes, Lignum Rhodium, Sarfa,
Aloes, Myrrh, Mastich, Sarco-
col, Olibanum; Lapis Calamina-
ris, Tutty, Litharge, Minum,
Lead, Saccharum \mathfrak{h} ; Unguentum
Album Camphoratum, Diapompho-
ligos: Emplastrum Leoninum Ar-
cei, Nigrum Arcei, Gryseum, de
Plumbo, de Minio, Oppodeldoch;
Barbarum. Among particular
Compounds, we have these.

§ 1. A Pouder; \mathfrak{R} Roots of
Tormentil, Bistort, round Birth-
wort, burnt Eggsells, Frankin-
cense, Dragons Blood, A. \mathfrak{z} ss. Lapis
Calaminaris \mathfrak{z} j. Litharge \mathfrak{z} ij.

make a pouder. § 2. Another
Pouder more effectual. \mathfrak{R} fine
Ceruse, Saccharum \mathfrak{h} , fine Bole,
Calcined Talck, Sanguis Draconis,
Craos Eyes, Mastich, Tutty, A. \mathfrak{z} j.
Camphir \mathfrak{z} ss. powder them fine-
ly and mix them. § 3. An
Oyntment for the same purpose.
 \mathfrak{R} Oyl Omphacine, Oyl of Roses, A.
 \mathfrak{z} ij. Oyl of Myreles, Ung. Popule-
um, A. \mathfrak{z} j ss. Leaves of Plantane,
Nightshade, A. M. j. bruised: In-
fuse 3 days, then press out, and
add Wax \mathfrak{z} ij. Litharge of Gold
 \mathfrak{z} ij. Ceruse \mathfrak{z} j. burnt Lead \mathfrak{z} ss.
Tutia, burnt Brass, A. \mathfrak{z} ij. Cam-
phir \mathfrak{z} j. rub them in a Leaden
Mortar to an Oyntment.
§ 4. Or this Emplaster. \mathfrak{R} Li-
tharge, Oyl of Rses, A. lbss. Mu-
cilage of Linseed and Orrice Roots,
A. \mathfrak{z} ij. boyl to a dne consistency;
then add, Wax, Turpentine, A. \mathfrak{z} ij.
Frankincense, Mastich A. \mathfrak{z} j. and
make an Emplaster. § 5. Or
this Emplaster: \mathfrak{R} Ung. Diapom-
pholigos, Diapalmæ, Grisei, A. \mathfrak{z} j.
Gum Elemi \mathfrak{z} ij. Saccharum Satur-
ni \mathfrak{z} ss. Wax enough to make it
into an Emplaster. § 6. Or this
Amalgama. \mathfrak{R} Lead \mathfrak{z} ij. melt
it, to which add Quicksilver \mathfrak{z} ij.
make an Amalgama, pour it up-
on Paper, powder it and mix it
with Emplaster of Lead or Dia-
pompholigos. This last exceeds
all external Medicines of this
kind. § 7. Yet let me have liber-
ty to add this. \mathfrak{R} Emp. de Carana
cum Mercurio, Emplaster
de Rani cum Mercurio; Ana
melt them together over a
very gentle heat, and apply it
to the part; this not only skins
immediately, but disscusses swel-
lings and drives back a flux of
humors though in a depending
part:

part : my own experience can commend it.

XXXIII. *The next thing to be considered is the preparation of Wound Drinks*; for we are to take care to promote an inward habit of Healing, as well as an outward: for as much as by these Vulnerary Potions, Physicians affirm (as *Manardus* and others) they have alone cured the worst and most desperate Ulcers. And *Ambrose Parreus* lib. 18. cap. 28. saith, Nature being assisted by such a Potion hath often seemed to me to work effects Wonderful and Miraculous in the recovery of Rotten Bones, and Apostemated, and the Consolidation of Ulcers. For these potions albeit that they do not by the Belly purge away the Noxious humors, yet nevertheless they are very efficacious in the cleansing of Ulcers, and in the preserving and freeing them from all the filth of the Excrementitious humours; the defæcating and carrying away the Dregs of the Blood; and the purging of the Wound from its thin Ichorus matter and impurity; In the agglutinating also of broken bones and restoring the Nerves to their pristine Union. And (saith he) by those admirable Medicines, the flesh and any other substance that is lost and perished, may readily be restored and made good again, and the part reduced to its former Health. Also *Andreas Matthiolus* upon *Disco-rides* lib. 4. cap. 16. saith, By such Potions I have seen healed as well the Wounds of the *Thorax*, as those of the *Intestines*,

which were thought to be Mortal, and altogether Incurable by any help and means whatsoever. *Ludovicus Septalius* in his Medicinal Animadversions, lib. 8. numb. 181. saith, We thought good oftentimes to make use of some Vulnerary Potions for many days together, until we saw the matter was wholly consumed. Lastly, *Sennercius* lib. 5. part 4. cap. 11. saith, These Medicaments consume the excessive humidity of the Blood, which is wholly unfit for agglutination; they supply a due and fit matter for the generating of Flesh; and by their moderate astringtion, they prevent and hinder the flux of humors unto the Wounded part. As to Our own Opinion and Experience; we know that they beget a healthful habit of Body. and a disposition in the Wound to heal.

XXXIV. *The most usual Vulneraryes and Wound Drinks among simples these are chief*: the greater and lesser Consound, Saraceus Consound, Sanicle, Agrimony, Wintergreen; Speedwel, Mugwort, Plantane, Savin, Horle-Tail, Ribwort, Buckhorn, Plantane, Adders Tong, Cinquefoil, Tansey, wild Tansey, Vervain, red Cabbage, Nep or Cat mint, golden Rod, Comfrey, Saxifrage Yarrow, Hounds-Tongue, Mouse-Ear, Hyssop, lesser Centory, Hypericon, Vipers Bugloss, Rupturwort, Scordium, Daisies, Strawberry leaves, Roots of Tormen-til, Pimpernel, long and round Bithwort, white Dittany, Vallerian, Bistort, Gentian, Rheubarb, Rhapontick; Flowers of Lilly.

Con-

Convally, of Hypericon, Roses, River Crabs, Sperma Cæti, Lentisk wood, Salsaparilla, Guajacum, Mummy, Mace, Bole Armoniack, Scabious, Harts-Tongue, Wood Sage, Sena. To which add Avens, Ladies Mantle, Herb Periwinkle, Herb Trinity (a kind of Trefoil, which four last, *Johannes Andreæ* as a *Cruce* saith are to be extolled and commended for this use. *Sennertus* saith, That the Herbs appropriated to the wounded part ought to be observed: as *Betony*, *Roses*, &c. for Wounds of the Head: *Speedwel* for Wounds of the Breast: *Agrimony*, for Wounds of the Liver: *Strawbery* leaves, for Wounds of the Reins. To these add *Decoctum Traumaticum*, *Decoct. Vulnerarium* & *Cancris*; *decoctum Sudorificum*, *Aperitivum majus* & *minus*, & *Vulnerarium Mynsichti*, all which see in Our *Pharm. Lib. 4. Cap. 14. Sect. 5. 8. 11. 20. 26. 28. and 30.* as also *Vinum Hydragogum* & *decoctum Traumaticum Nostrum*, in Our *Doron Lib. 2. Cap. 13.*

Among particular Compounds we have these. § 1. A Vulnerary of *BARBET*. R *Roots of Comfrey* ʒss. *Wintergreen* Mij. *Sanicle* Pij. *Strawberries*, *Ladies Mantle*, *Sage*, A. M j. *Red Wine* q. s. boyl, strain and dulcify with white Sugar: Dose ʒiij. § 2. Another where the Bone is hurt. R *round Bitchwort Roots* ʒjss. *Sowbread* ʒj. *Self-heal*, *Cranes-bill*, A. M j. *Savin* ʒiij. *Mummy* ʒij. *Crabs-Eyes* ʒss. *Galangal* ʒij. all being grossly poudred and cut, boyl them in *Red Wine* q. s. to ʒiij. of the strained Liquor add *Syrupus Symphiti Fernelij* ʒiij. Dose ʒiij.

§ 3 A Vulnerary Drink of *Sennertus*. R *Ladies Mantle*, *Sanicle*, *Saracens confound*, ground Ivy, *Red Mugwort*, A. M j. of the best Wine a Gallon or something more: boyl them in a close Pot, over a gentle Fire, till a quarter is wasted: give a draught morning and night. § 4. Another from *Sennertus*. R *Wintergreen*, *Herb Periwinkle*, *Bugle*, *Mugwort*, *Pimpernel*, *Agrimony*, A. M ij. boyl in Wine q. s. to the wasting of a quarter, and give half a pint morning, noon, and night. § 5. Another from the same *Sennertus*. R *Tormentil*, *Strawberry Leaves*, *Sanicle*, *Ladies Bed-straw*, *Winter green*, A. M j. boyl in Beer q. s. and give it to Drink. § 6. Or this which is more powerful. R *Oak wood*, *Lentisk wood*, *Mistleto*, A. ʒij. roots of *Confound*, *Aristolochy*, *Centory*, *Valerian*, *Madder*, *Tormentil*, *Bistort*, A. ʒss. Chalibeated water (viz. wherein Steel has been often quenched) ʒxij. infuse all for 24 hours; then boyl in a double Vessel till a third or more be wasted: then add, *Parssly Roots*, *Bramble Tops*, *Hemp*, *Moufe Ear*, *Herb Trinity*, *Perwinkle*, *Horse-tail*, *Strawberry leaves*, *Flowers of Lilly Convally*. A. Mss. *Rhapontick*, *Cinnamon* A. ʒss. in the end of the Decoctio add of *Aromatick wine* ʒiij. then strain, and make it pleasant, with white Sugar. § 7. A Diet which I have had great Experience of. R *Scabious*, *Self-heal*, *Wintergreen*, *Sanicle*, A. M ij. *Angelica*, *Betony*, *Sage*, *Baum*, *Scordium*, *Centory*, *Ladies Mantle*, *Avens*, *Perwinkle*, *Herb Trinity*, *Hops*, A. M j. *Plantane*, *Buckhorn Plantane*, *Borage*

rage, Bugloss, Consfrey, Agrimony, Wormwood, Hypericon, Cinquesoyl, Bramble buds, Mint, young Oak leaves, Wood-bine leaves, Wild-Daisies, Monks Rhubarb, R. semary, Red Beets, A. Mss. Guajacum and Sassafras rasped; Sarsaparilla bruised, A. ℥iij ss. Coryander seed, Carrawayes, Rhodium rasped, roots of Valerian, Tormentil, Bistort, Virginian Snakeweed, Contra Yerva, A. ℥ij ss. all being cut and bruised, boyl them in Eight Gallons or something more of Wort, to the waisting of about six quarts, add Honey lbviij. strain and being cold enough, put it into a Rundlet, and work it up with Yeast: give it as ordinary drink: But this Dyer may be of more force by bare Infusion of the Ingredients in Lime water, for a few days; and then working it up with Yeast as aforesaid: every one may use what likes him best.

XXXV, To repel the flux of from the Wounded part.

§ 1. Because that sometimes there happens a flux of humors to the Wound; the cause is to be considered, which is for the most part in a body not perfectly sound, which is either Plethorick or Cacoehymical; Where upon, the great abundance of Blood or Vitious humors (having been long treasured up in the Body) rush to the affected part, and there excite many Evils. § 2. In order therefore to prevent this disaffection, the generating of vitious humors are to be prevented; what are present are to be removed and taken away; the part wounded is to be strengthened; and the pain if any

be mitigated and eased. § 3. That this might be done the ancient Physician prescribed chiefly Blood-letting; which did apparently cause not only an Evacuation, but likewise Revulsion, a Vein being opened a good distance from the part affected, and most commonly on the contrary side, even the very first day of the Wound, and indeed before any Medicament should be administred: the Quantity of the Blood taken away, was according to the store in the Body, and the strength of the Patient. § 4. But that this may be better done otherwise, we now come to show; and besides, if much Blood had flowed from the Wound before hand, Venesection was wholly to be omitted; The Stopping of the Hæmorrhage we have already taught at Sect. XX. foregoing. The afflux of other Vitious humor is to be prevented or removed by due and fit Purging. And this is to be done in great Wounds, where is much pain: Or where there is any cutting or dilating to be used: Or where Bones are to be made bare of their Flesh: Or, in a word, in all Wounds whatsoever, wherein the pain is more Vehement than Ordinary. § 5. But in small Wounds, and in such as are free from great pain, as there is no danger, so neither is purging to be used; but if the Belly be bound, it may be opened and loosned by a Clyster. § 6. Now although all evil humors ought to be evacuated, yet chiefly such as are hot, cholerick, and serous, for that they are more apt for motion, and more flowing, gene-

generating Inflammations, Bryipela's, and exciting Feavers.

§ 7. For this purpose, Senner-tus advises (as most safe to be administered) the Exhibition of Manna, Syrup of Roses Solutive, Rhenbarb, the leaves of Sena: And of Componds, Tryphera Persica, Electuarium de Psyllo, & Rosarum Mesues: abstaining from the hottest kind of Catharticks, least they should excite what they are designed to take away or cause an Inflammation.

II. Of the Method of Cure in special.

XXXVI. Wounds of the Veins and Arteries.

§ 1. If a Vein be Wounded the Blood issues more violently, is thicker, blacker and less hot. If an Artery, the Blood is yellow, thin and hot. § 2. These are hard to cure, chiefly of the Arteries, by reason of the loss of Spirits, hardness of their Coats perpetual Motion and force of the Blood. § 3. The cure is performed, first by closing the lips of the wounded Vessel, and applying things to their Orifices which stop Blood, as we have taught at Sect. XX. But Scultetus commends Galens Emplaster of Frankincense and Aloes, which you may see in our Pharm. lib. 4. cap. 21. sect. 33. Pulvis Sperniole Crollij (Pharm. lib. 4. cap. 21. sect. 76.) and an Emplastres of Potters Clay made with sharp Vinegar of Roses: which three remedies he saith are wonderfully forcible to stop a Flux of Blood. To these add Crepus Lupi, a kind of Pucklist or Toadstool: Vitriol Poudred and put into a Cloth: as also

Pulvis Agricola. § 4. If you use Galens powder aforesaid, having laid it upon the Wound, you are not to unbind it till the third day: while this Medicament yet sticks upon the Wound, put (saith he) another upon it: but if it loosen of its own accord, then with the Finger, gently pressing down the Root of the Vessel, that nothing may flow forth, take away that with a careful hand, and put on the other. § 5. Senner-tus commends these things. R Aloes, Frankincense, wheat flower, fine Bole, spiders Cobwebs, soft flux of a Hare, A. 5i. make a powder. Or, R a dead Nettle, beat it into fine powder, and strew it upon the Wound. Or R Crude Vitriol, powder it and strew it upon the Wound. Or dissolve it in water, moisten linnen Cloths therein, and apply them, but this even Penetrates through the Vessel that is hurt, and here you ought to beware if there be any Nerves in the Wounded part: We commend Aqua Styptica as a most admirable thing. Glandorp has his Decoctum Stypticum, and his burnt Alum, which never fails him: wet Pledgets in the Water, and then dip them in the Powder of the Burnt Alum. § 6. You ought also to use Revulsion by Cupping-glasses: and Interception with such things as are cold and dry, which may thicken the Blood, which are to be applied a little distance from the Wound. § 7. And when the Blood shall become sully stanch'd, and clotted, then you must do the best that may be to prevent its putrifying, by speedy dissolving

ving of it; for which purpose inwardly you may exhibit Volatile Salt or Sp. of Sal Armoniack. Tinct. of δ and Corals: Sp. of Terra Sigillata, Mummy, Sp. of Angelica, Syrupus Acerosus, Treacle Vinegar, Treacle water, Volatile Salt, and powder of Vipers outwardly for Topicks, you may apply this. R. Oyls of Roses, Myrtles, and of Earthworms, Ana, mix, and anoint with it, having first bathed or gently fomented with S. V. in which Volatile Sal Armoniack has been dissolved. Or this. R. of Bulls Gall, Pigeons Blood, Cummin seed, Volatile Sal Armoniack, A. \mathfrak{z} j. Meal of Fænugreek, Celtick Spicknard, A. \mathfrak{z} ss. Oyl of Camomil \mathfrak{z} ij. Wax, enough to make a Liniment.

XXXVII. Wounds of the Nerves and Tendons.

§ 1. A Nerve Wounded is known, 1. by Anatomy from the Site of the Wounded place, which shews in what Member they are inserted. 2. from the great pain, which is generally accompanied with Inflammation, Convulsion, delirium, and Syncope. § 2. Wounds of the Tendons are also known by the place, since they terminate near the Joynts; and with which the Hands and Feet are well stored: Nerves are in the Heads of the Muscles: Tendons in their Tails, upon or near the Joynts. § 3. All Wounds of the Nerves are dangerous; & a Puncture is more dangerous than an Incision: Convulsion or Swooning are evil signs: Nerves wounded are more dangerous than Tendons: and both being hurt do easily putrefy: If the Nerve be cut through the Symptoms are not

altogether so grievous. § 4. In order to the Cure, the pain is first to be abated (wherein beware of External cold Medicines, and the cold Air, for they both hurt:) things hot, drying, and Void of sharpness do good. § 5. Let the the Wound be kept open till the Cure is absolutely performed, that the matter may flow freely forth, which being kept in, might cause pain, and putrefaction of the Nerve. § 6. Use convenient purging, and that often if the Body be Cacochymical, because it calls the humors another way. § 7. If the Nerve should be putrefied, it must either be cut off, or removed by an Actual Caution. § 8. You must also observe whether the Nerve or Tendon lies bare or not: if bare let the Medicines applied be warm; but if covered let them be the hotter. § 9. Let the intermediate parts be fomented with Oyl of Lillies, Roses, Earthworms, used very hot, &c. not forgetting due purging. § 10. Always remember what Hippocrates saith, Sect. 5. Aphorism. 18. Every thing that is cold, is an Enemy to the Bones, Teeth, Nerves, Brain, Spinal Marrow: but that which is warm is a friend to them. And this is most true in the Nerves, because as they are void of Blood, and have but little natural heat in them; so are they endued with a most exquisite Sense, and are soon and easily offended, especially by any thing that is cold. § 11. Those External Medicines most necessary for the Wounds of the Nerves are Oyls of Rue, Rosemary, Myrrh, Costmary, Juniper-berries, Castor, Wax, Turpentine, Spike, Dill,

Dill, Carraways, all distilled : Oyls of Olives, of Earthworms, of White Lillys, Hypericon : Gum Elemi, Tacamahac, Caranna, Balsam of Peru, Opobalsamum, Spirit of Wine, &c. Barbet saith. Oyl of Wax, Lime Water and Ung. Fuscum are here of excellent use, if rightly applied.

§ 12. But since the use of Medicaments do somewhat vary, according as the Nerve is wounded either by a down right cutting; or by pricking or by contusion, we shall speak of each in special. However in general this Composition of Mezgitus is commended. R Venice Turpentine, Tears of the Fir-tree, A. ʒj. Tacamahacca ʒss. Caranna, Balsam of Peru, A. ʒiij. Propolis ʒvi. Oyl of Hypericon ʒj. mix and make an Ornament.

XXXVIII. Pricking of the Nerves or Tendons.

§ 1. A Nerve being prick't is known from the kind of the Weapon; the Condition of the Wound, and the Symptoms : for if the wound be narrow, and there follows it a grievous pains, and thereupon a beating, Inflammation, a Fever and a Convulsion, the Nerve is but prick't ; for such Symptoms never happen if the Nerve be wholly cut asunder : for being transversly cut in two, it no longer continues its commerce with the Brain; nor can it draw the same into consent with it, whence no pain nor Convulsion can be excited. § 2. Galen in Arte Medendi, cap. 92. saith, That the puncture of a Nerve or Tendon by reason of the vehemency of the lance, excites a Convulsion. And Sennertus, lib. 5. part. 4.

cap. 15. saith, It is the most dangerous among all Wounds of the Nerves: and so much the more dangerous by how much the Body is impure, and ill disposed. Lastly, Hippocrates sect. 5, Aph. 65. saith, If upon the pricking of a Nerve a Tumor appears, and then suddenly disappears again, a Convulsion and delirium will follow. § 3. In the cure you must purge the Body from all vicious humors : order a moderate diet, and that the Sick abstains from passions of the Mind and Venery : keeping the Wound also free from the cold Air, Wind, and Corruption. § 4. You must assuage the pain by Anodyn Oyls and Cataplasms : Put into the wound Oyl of Turpentine mixt with Spirit of Wine, and Oyls of Earthworms : and anoint the part round about with the same : If the pain ceases not yet, apply a Cataplasim made of Bean Meal, Meal of Lupins and Orobus : with Camomil Flowers, Oyls of Cammomil and Juniper distilled, and Oyl of White Lillys : for this eases pain, dries, discusses, resists putrefaction and cherishes the native heat. § 5. Sennertus saith ; That the same Cure (almost) is to be instituted, and in the same manner to be ordered; as is wont to be in a Gangreen beginning, wherein you must abstain from all cold things whether dry or moist. § 6. The same Sennertus saith, That Oyls of Earthworms, white Lillys, Costus, Rue, Castoreum, and Turpentine are excellent here : and the last may be used alone, in Children, Women, and such as are of a moist and soft Constitution.

tion; but in dryer Bodies some Euphorbium ought to mingled therewith, also Ammoniacum Galbanum, Dittany, Round birthwort, and generally all Roots that are bitter without Restriction: *Propolis* in the same manner either alone, or mixt with *Euphorbium*: Or this Emplaster of Galens. R *Wax* ℥i℥s. *Turpentine*, *Pitch* A. ℥vj. *Euphorbium* ℥j. mix them. But *Sen nertus* saith thus. R *Oyl* ℥x. *Wax* ℥iij. *Euphorbium* ℥i. To these Medicines add those mentioned sect. 27. § 11, 12. § 7. Take care in drawing forth the sanies or corrupt matter, either by drawing Medicaments, Or by widening the Wound by incision cross-wise in form of an X. Or by Tents; yet so as they touch not the Nerves. Medicaments for this purpose are the following. R *Old Leven* ℥i℥s. *Doves dung*, or *Brimstone* ℥j. *Spiritus Vini*, enough to make the Medicine of the thickness of Honey. Or this. R *Oyl of Turpentine*, or *Tears of the Fir Tree* ℥j. *Sigapenum*, *Propolis*, A. ℥ss. *Euphorbium* ℥j. mix them. Or this. R *Sagapenum*, *Opopanax*, *propolis*, A. ℥ss. *Tacamahac* ℥iij. *Sulphur vive* ℥i℥s. *Oyl of Turpentine* ℥j. mix them. § 8. Lastly, if none of these things do, you must divide the Nerve and apply this. R *Oyl of Turpentine*, and of *Earthworms*, *Yolk an Egg*, A. ℥iij. which use very hot: and impose over all *Emplastrum Sticticum*, or *Caranna* & *Tacamahac* dissolved in Compound *Oyl of Hypericon*.

XXXIX. Of the Down right Cutting of the Nerves and Tendons.

§ 1. If the Nerve be not wholly

cut asunder, the Symptoms are much like the former, but not full out so great: if it be cut long ways, the pain is not so great, nor is there so much fear of a Convulsion, for that the Fibres are not so affected: if the Nerve be wholly cut asunder transversely, there is no pain at all felt: and then either the sence, or else the motion of the part is taken away: so also if a Tendon be throughly cut, the motion of the member is lost. § 2. If the Nerve be Wounded according to the length, the lips of the Wound are to be drawn together and conjoynd: but if the Wound be transverse, and that necessity so require it, then a Suture or sewing of the Lips is to be attempted, but with that care that you prick not the Nerve. § 3. But in drawing of the Wound together, you must so do it, as to leave a free passage for the Sanies, which if need require may be done with a Tent. § 4. Take Quicklime often washed and mixt with much *Oyl of Roses*, and apply it. Or *Diapompholigos* mixed with good store of the said *Oyl*: as also the Medicaments mentioned in the two former Sections. § 5. If the pain and Inflammation be great apply a Cataplasma as is advised sect. 28. § 4. § 6. The pain being eased, and the Cataplasma removed; you may assume the former Medicaments; and externally cover the Wound with *Emplastrum Diapalma*, or *Sticticum* of *Paracelsus*.

XL. Wounds of the Nerves and Tendons by Contusion.

§ 1. The Contusion of the Nerves is generally by a Fall or Blow: Where

Where, the Skin having a Solution of Unity, there follows an Ulcer, and from the afflux of humors, many other Symptoms. § 2. If the Nerve be not bare, but only hurt, you must take great care to dissolve (as soon as possible may be) the coagulated Blood; for if it should suppurate, the Nerve would easily putrefy. § 3. For this purpose therefore let Cloths be dipt very warm into the Oyls of Dill, Castor, Worms, Rue, Camomil, Savin, or of Rosemary, and applyed hot to the affected part: Or foment very hot with Spunges dipt in *Balneum Contra Sterilitatem Myrsichti*, made with Wine, and mixt with an equal Quantity of S. V. and after apply this Emplaster. *R Roots of Sow bread in powder* ℥ij. *Species Diambra* ℥i. *Oyl of Castor* ℥iij. *Turpentine* ℥j. *plaster of Betony* ℥j. *Honey q.s.* make it into an Emplaster: and give inwardly *Oleum Lavendulae ad gut. ij. or iij.* if you fear Convulsions. § 4. If by the blow the Nerves are so obstructed, as to cause a stupor or numbness of the part, or a stiffness, you may remove them (the body being first purged) by application of the Emplaster following. *R Galbanum* ℥j. *Curranna* ℥ss: *Oyl of Euphorbium* ℥jss. mix and make a plaster. Or this, *R Mans fat, Goose grease, A.* ℥j. *Oyl of Earth* ℥iij: mix and make a Liniment: with which anoint the place Morning and Evening; and apply over it the Styptick Plaster of *Crollus*, or *Diachylon* with Gums. § 5. But that the Cure might be the more hastned, you must continually give the Sick some of those Diet

mentioned at *sect. XXXIV*, especially at § 5. of the same Section. § 6. If there be a contraction of the Member, (which is not to be attributed to the Nerves, but to the Tendons.) you may help it with this. *R Oyls of Earthworms, of Camomil, and of Foxes, A.* ℥ss. *Ung. Althæa Compositum* ℥j. *Capons grease* ℥jss. mix and make a Liniment: or you may use other Oyls and Oyntments which are Emollient, with which you must daily anoint well, and often use Extention with the Hand, or by Weights, or Instruments.

XLI. Wound of the Ligaments.

§ 1. The Ligaments (being void of sense) when they are Wounded produce neither pain nor convulsion: and that Ligament which tendeth from one Bone to another, being Wounded, is most of all free from danger: and therefore being insensible, do seldom draw other parts into Consent. § 2. Yet notwithstanding, those which are inserted into a Muscle, may (if not rightly dealt with,) be the Cause of many evil Symptoms. § 3. And because the Ligaments have but a very weak heat, whereby they are apt to heap up Excrements, contract a putridness, and excite other Maladies, therefore they bear not Wounds very easily. § 4. For the Cure of these Wounds, you may use the dryer Medicines of those prescribed in Wounds of the Nerves: as also *Pulvis Restorativus, & Astringens*: Or this. *R Olei Rosmarini* ℥jss. *Oyl of Myrtles* ℥ij. *Murrh, Aloes, Mastich, fine Bole, Mummy, A* ℥j. mix and make a Liniment. § 5. If they are so relax, as to cause

a Luxation, (which the *Sciatica* pain does give us a demonstration is possible to be done) you must first purge out the vicious humors; then corroborate the part, and anoint with a discutient Liniment, Balsam, or Unguent, upon which you may apply this Emplaster. *℞ Scirpus Crocivij ʒij. Oyls of Earth, and Bricks, A. ʒij.* mix and spread upon Leather.

XLII. Wounds of the Joynts.

§ 1. Wounds of the Joynts are much of the same Nature with Wounds of the Nerves, and are either with Luxation, or without it. § 2. Wounds of the Joynts are dangerous and hard to Cure; because being parts void of flesh, and hollow, they are apt to receive fluxions; for being knit by Membranes and Membranous Tendons, they are easily assaulted with pains, whence comes Inflammations, Watchings, Deliriums, and Convulsions: and *Galen de Meth. Medendi lib. 4. cap. 6.* saith, That they easily degenerate into Ulcers, of an ill and dangerous Nature. § 3. *Hippocrates also saith, That in Wounds of the Joynt, if the Nerves be altogether cut asunder, the Sick will without doubt be lame.* § 4. Wounds of the Joynt with Luxation, are yet more dangerous, for that the Joynt cannot be reduced, without apparent danger of the Patients life; so that the Physician, by heeding this Prognostick, may do well to save his Credit: for if the Joynt being reduced to its due place, continue there it bringeth Death to the Sick within a few days, and this has been

commonly seen, upon a very small Wound. The reason is because the Nervous parts about the Joynt suffer, whence cruel pains, fluxions, Inflammations, Convulsions and Death it self ensues; and sometimes from the Suffocation of the natural heat, there follows a Gangreen and Sphacelus. § 5. The Cure is almost the same with Wounds of the Nerves if it be without Luxation, by drawing the Lips together, yet leaving an Issue for the Quittor: and by defending them from the Injuries of the Air, or any cold thing, because they have in themselves but little heat: For this purpose use such Oyls, Balsams and Emplastres, as we have directed in the Wound of the Nerves, at sect. 37. § 11. 12. as also the Cataplasim at sect. 37. § 4. which is excellent. § 6. The next thing to be done, is to prevent the afflux of humors, by purging, Interception, and a good position of the Member: you may purge with Infusion of *Sena*, *Diacassia* or *Catholicon*: for Interception use *Unguentum astringens* (some distance above the Wound) over which apply *Emplastrum Nigrum Prius*, or *Sticticum Paracelsi*: for the Position of the part: if the wound be in the fore part of the shoulder, put a Boulster under the wing, so that it may bear up the Arm, and drive the top of the Shoulder up higher. If the Wound be in the Elbow, the Arm is neither to be kept straight, nor to be much bended inward, but placed in a middle posture in form of an obtuse Angle. The Wrist or Joynts of the Fingers, being

ing wounded, the Hand is to be kept half bended, and the Finger also; least the Hand should be hurt by contraction. *If the Thigh be wounded*, the Sick must lye on his Back, with Pillows under the *Hucklebone*, with bindings: but he must sometimes stir and move his Thigh, this way and that way, lest there should be a hurt of the Motion. *The Knee when it is wounded*, must be stretched forth, and placed in a right and strait Figure, that so lameness may be prevented. § 7. *Now that this situation of the part may be so preserved, and not altered either sleeping or waking*: It is to be kept in that Posture, either by fit and convenient Bandages, or else by wooden Instruments made for that purpose. § 8. *If there be a Luxation withall, and in a great Joynt, you must not as we said before reduce it: but the sick is to be told before hand of the danger if it be restored*; and of an unavoidable lameness, that will follow thereupon, if it be not: least by the Vulgar we should be accused of Ignorance and unskilfullness, or that by your means the Sick became lame or maimed. By these Prognosticks, foretelling to the by-standers the success, the Physician or Artift may preserve his Credit and Reputation. § 9. *These considerations being past, you must stop the fluxion by § 6. and place the Member in such a posture, as may be most convenient, and bring least pain to the Patient*, but provided always that the Member hang not down lest it provoke an afflux of humors, then

the Wound is to be Cured as other Wounds; but not bound up in the same manner, observing the Cautions at § 5. aforegoing. § 10. *Cataplasms are likewise to be imposed, not upon the Wound it self, but upon the adjacent parts*, lest the weight thereof should hurt it: and in regard fluxions are easy to be provoked, the Body by manifold Purgations and Sweatings is to be cleansed from its vitious and superfluous humors.

XLIII. Wounds with Contusion.

§ 1. *They are known from the Instrument hurting*, the violence of the pain, and the black and blew color of the part. § 2. *A Wound with Contusion is more dangerous and difficult to cure, than that without*: for the bruised parts and Blood powred forth, if they be not discussed, must of necessity be turned into Pus, without which the Wound cannot be healed: if they begin to putrefy, it may excite and cause a Gangreen. § 3. *In order therefore to the Cure, you must first have respect to the Contusion*, wherein you must prevent the afflux of humors by revulsions, defensatives, and repellers: then the Blood which flowed in, must be changed into Quittor by Medicaments not too moist (unless you think it may be discussed :) and round about where the part is bruised you must apply Cataplasms: for this purpose *Cataplasma Laxativum, Schroderi, vel Resolutivum Forresti* (in Our Pharmacopœa lib. 5. cap. 7. sect. 9. 11.) are excellent. These you may lay round about the

K k 3 Wound

Wound, where it is bruised, but not on the Wound it self. § 4. *The next things to be considered is the Wound it self, upon which you must apply digestives of Rosin, Turpentine, and Yolks of Eggs; or Triapharmacum, or Basilicon, and such like.* § 5. *The Pus being bred, you must then use abstersives and glutinatives: but if the bruised substance will not change into Pus; but on the third, fourth or fifth day, a Tumor arises with Pain, and so increases from day to day, whereby the color is extinguished, and it becomes Yellowish, with signs of a Gangreen near at hand, you must then scarrify it, and the Ægyptiack Unguent is to be laid thereon, ordering the Cure as we have taught Cap 22. Sect. 4. foregoing.* § 6. *If with the Flesh the Nerves and Tendons be bruised, foment the part with discussing Oyls made: hot, such are Oyls of Rue, Orrice, Dill, Marjoram: and if withal the Skin be bruised, then first lay on the White of an Egg mingled with Oyl of Roses, to ease the pain: after foment the part with astringent Wine lukewarm; and then lay on a Cataplasm of Bean-Meal and Oxymel; Or of leaves of Elm boyled in Oyl: Or the Ashes of the small shoots of the Vine, mixed with Hens-grease and Vinegar.* § 7. *If there be Vehement pain withall, then take liquid pitch, Bean Meal and Oxymel, which mix, boyl, and lay on as hot as the Sick can endure it: if there be more cause of drying, mixt with the former. Meal of Orobus, Powder of Orrice-root, anoint-*

ing the place with Oyls of Camomil, Dill, Orrice and Rue, or with any one of them, Or make an Oyntment of Galbanum and Myrrh; giving inwardly Roots of Birthwort, Gentian, Elecampane, Centory the less, and Ammoniacum with Honey. § 8. *If there be a hardness on the Nerve or Tendon, whereby Numbness or Stupidity be excited, then Emollients and digestives are to be laid on, as Roots of Althæa, of White Lillys, Bdellium, Ammoniacum, Galbanum, Diachylum Magnum.* § 9. *If the Ligaments be bruised, you must apply such things as heat, dry, discuss, and strengthen, such are Oyls of Mastick, Spicknard, Orrice, Spike, Emplasters, Barbarum, Nigrum.* Or this. *Rx Oyls of Mastick, Spicknard, Juniper berries, A ʒij. Galbanum, Ammoniacum, A ʒss. Bdellium ʒij, Saffron ʒj. Wax q. s. mix and make an Unguent.*

XLIV Wounds by biting of living Creatures.

§ 1. *In Wounds made by the Bittings of Living Creatures, there is present a Contusion with the Wound, which is either greater or less, according as the Teeth of the Creature is sharper or more blunt.* § 2. *In the Cure therefore you must first carefully squeeze or press forth the Blood out of the Wound; then to prevent the greater afflux of humours, apply some defensive of Oxycrate or the like, upon parts superiour to the Wound: and to the Wound it self (for to ease pain and cause suppuration)-this. Rx one Egg, Butter ʒss. Saffron ʒj. Oyls of Violets and Roses, A ʒij. mix them. Or the*

the Cataplasma Rondeletij. § 3. If you fear any Poyson or Virulency in the Wound, you must draw it out by Cupping-Glasses or other Medicaments: by a moderate binding of the part about the Wound: by cutting the Flesh unless Nerves, &c. hinder: by Application of Causticks; Or by washing and fomenting with Wine and Venice Treacle mixed together: Immediately after applying this: R̄ Unguentum Basilicon, fresh Butter, Venice Treacle A. ʒss. Oyl of Roses ʒj. Yolks of Eggs N^o j. mix them. § 4. And that whatsoever is bruised may be wholly converted into Pus, apply this. R̄ Honey of Roses, Resin, Turpentine, A. ʒss. Yolk of one Egg: Powder of Myrrh, Aloes, round Birthwort root, Orrice, Venice Treacle, A. ʒij S.V. q. s. mix them. § 5. The Pus being produced, the Wound being wiped and cleansed, you must fill up the Flesh with Incarnatives, and then produce the Cicatrize, as in other Cases. § 6. If a Gangreen be feared as nigh at Hand, the Cure is to be ordered as we have taught in a Gangreen, cap. 24. sect. 4. foregoing; wherein also you must be sure to fortify the Heart with internal Antidotes. § 7. If there be any stiffness, numbness, or want of Motion, you must (after the wound is healed) foment the part with hot Baths and Liniments, applying such things as may comfort the Nerves, Tendons, and Ligaments, or parts adjacent hurt: for which purpose we commend this. R̄ Oyl of Turpentine, Aqua Vitæ, A. ʒss. Hogs Lard ʒij. melt together, and stir them till they are cold.

XLV. Wounds Poysoned or made with poysoned Weapons.

§ 1. If they be made by poysonous Creatures, that will appear from the relation of the sick: but if they are made with a Dart, Bullet, or other Weapon, envenomed, or poysoned, it will be known from the Extram great sense of pain and pricking in the wounded place: the natural color of the part will be quite changed, degenerating into a wanness, yellowness, leaden color, or blackness: and instantly grievous symptoms (for which no reason can be given) do follow: In the whole Body there is felt an Extraordinary heat and burning, a kind of stupidity or great straightness of the Heart, with sometimes Palpitation, and sometimes fainting or swooning Fits. § 2. For as soon as ever the poyson is received by the Veins and Arteries, it immediately diffuses it self through the whole Body, striking at the vitality of all the principal parts, chiefly of the Heart, from whence the aforesaid grievous Symptoms do arise, which Symptoms are accompanied with others; according to the Nature of each poyson. § 3. All Wounds made either by any poysonous Weapon, or by the Biting or Sting of any venomous and poysonous Beast or Serpent, are not only far more dangerous than a Wound free from poyson; but of a very perilous consequence: for a small Wound poysoned, often brings Death, whereas great Wounds free from poyson are often healed. § 4. So likewise by how much the poysoned wound is

nearer to the Heart or Brain; and by how much the more numerous, dangerous, and contumacious the Symptoms are, by so much the more dangerous is the Disease: which if the said Symptoms are many, great and rebellious the Wound is for the most part mortal; otherwise, if they be few, not vehement, and are mitigated by Remedies, so much the greater hope of Recovery remains. § 5. In order to the Cure, you must first stop the passage of the poison to the inner parts of the Body, observing all that we said in Sect. XLIV. § 3. and then in the next place, that its strength and power may be broken and weakened by Alexipharmick Medicaments or Counter Poisons; among which the Volatile Salt of Vipers, Volatile Sal Armoniack, are Excellent, nor has our New London Treacle the least place. § 6. If any of the poisoned Weapon be left in the Wound, it must be first taken forth, for till then all other attempts are in vain; the way of doing which, we have before taught. § 7. But that the poison may not penetrate farther, you must intercept it by bandage as Celsus Lib. 25. Cap. 27. teaches, which must not be too hard, lest the part becomes numbed, loses its sense, or be taken with a Gangreen: This advise is certainly too short, for poison once mixt with the humane Spirits, becoms so Spiritual and fluctuating, as than no external force can stop its career: therefore we rather advise to internal means, and strong sudorificks, which may defend the Heart, and expel the

malign and poysonous Myasms from the noble parts: in this case you may either give our New London Treacle ad 3j. or more, as the Patient is in strength; or the specifick Electuary of Crocollus (in our Pharm. Lib. 4. Cap. 22. Sect. 89.) ad ʒj. if it was by the biting of a Serpent or Viper, you may give their Volatile Salt a gr. vj. ad xij; or the Bezoar Animale ad 3j. or Essence of Vipers to ʒij. or Bezoar Animale Compositum ad 3j. these you may exhibit in Viper Wine, Treacle water, or the prophylactick Water of Sylvius. § 8. Outwardly you may attract the poison by Cupping-Glasses, especially with scarification, made deeper than otherwise upon other occasions: after the removal of the Glasses, apply the Dung or Guts of Hens, Pigeons, or other birds, or their Anus, or their Bodies while hot, being slit alive. § 9. If the place be not Nervous, the flesh round about is to be pared away, yea and cut quite off; or you may most effectually apply the actual Caustery, or a Caustick Medicament; after which, care must be taken that the Escar may fall off as soon as may be: if it falls not off soon enough of it self, you must take it off with an Incision Knife: after which, you are to apply an Onion with Salt, or Wild Garlick, or Rue, upon the Wound: so also Doves-Dung, Walnuts, Garlick, Salt and Honey; Hypericon, Swallow-wort, Elecampane, Radishes, Dittany, long and round Bithwort, Carduus, Scabious Rue, Gentian, Vipers Grass & all other Simples, which attract

and

and draw poyson, § 10. If the sick will not endure cutting nor Causticks, you must wash the Wound with Vinegar or Wine, in which some Venice Treacle, or our London Treacle is dissolved, and then apply the things just now before described: but in Nervous parts use not things too sharp, least you excite both pain and a Convulsion: and where you may apply them, continue them but for a day or two, and afterwards such things as are more mild: you may also apply Mithridate or Venice Treacle, to the same, especially if you mix therewith Balsamum Cæricum Compositum, or Balsamum Stomachicum, or Balsamum vitæ majus compositum, or the Apoplectick Balsam of Høyftius: To which add Unguentum Nicotianæ. § 11. Guido commends this Emplaster; R Galbanum, Sagapenum, Opponax, Assa Fætida, Myrrh, Pepper, Sulphur, A. ʒjss. Doves-dung, Ducks dung, A. ʒij. Calamint, wild Min', A. ʒj. dissolve the Gums in Wine, and mixing all with Honey and old Oyl, make an Emplaster not too stiff. Or this, R Roots of Dragon-wort, of round Birthwort, A. ʒj. Tobacco, Scordium, A. M j. Frankincense, Myrrh, Sulphur vive, A. ʒss. Dittany of Crete, Angelica root: white Dittany, A. ʒij. Oyl of Scorpions ʒij. Oyl of Turpentine ʒj. Venice Treacle ʒss. Ship Pitch, Wax, A. q. s. make an Emplaster. To these you may add Oxyrocem, Sæcticum Paracelsi, Diasulphuris Rulandi, Diaphoreticum Mynsichti, Oppodeldoch Wurtzij & Magneticum Hartmanni: after-

wards the Cure is to be don, as in other Wounds.

XLVI Wounds made by Gun-shot.

§ 1. Those Wounds are known by sight; and are very hard to cure if the body be Cacochymical Or, the bones be broken withal: Or, if they happen in any principal and noble part; Or if they fall in any parts (as the joynts and great vessels) which can draw the principal parts into consent; Or, if they be made be a poysoned Bullet, being then for the most part mortal; and which is known by the flesh being wan, and leaden coloured, heaviness and sluggishness of the whole body, trembling and palpitation of the Heart, faintings, swoonings, and such like Symptoms without cause. § 2. In the Cure of these Wounds, there are three sorts of Indications: first the drawing forth of the Bullet: secondly, the converting the bruised flesh into PUS: thirdly, that the Wound be filled with flesh and cicatrized. § 3. The way of extracting the Bullet we have already taught, wherein you are to note these three things: first, that the way be sufficiently opened by these Instruments: secondly, that the Bullet be laid hold on: thirdly, that it be drawn then forth by the Chyrurgians hand. The Instruments for this purpose are Exhibited in Paræus, lib. 10. cap. 14. and in Guliel. Fabricius Cæ. 1. Observ. 88. where, by an Invention of his own he delineates an Instrument, with double pipes, in form of a wimble, as being most apt and fit for the draw-

drawing forth of these Bullets
 § 4. If the Bullet cannot be found, and it be of Lead, the Wound is sometimes healed up, with it remaining in it, and that without any danger: But if the Bullets be of Iron or Brasse, they will not (by reason they contract a rustiness) suffer the Wound to be so healed. § 5. But if the Bullet stick in any noble part, or where it may draw the noble parts into consent, whereby the life of the sick is in apparent danger, in this case you are not so much as to attempt the drawing forth of the Bullet, least you hasten on that death, which the Wound it self in all probability is likely to bring along with it: § 6. In the next place if the body be Cacoehymical or Plethorick, let convenient purging be instituted. § 7. Then take care that the bruised flesh be converted into Pus, that it may be separated from the sound flesh, and the sound parts. But because there may be danger of a Gangreen; the common Digestive and Suppurative Medicaments, used in other Tumors and Wounds have no place here, especially if any of the nervous parts be bruised, which will not admit of such moist, oily and fat Medicines, but require those that be dryer, and Anodyne withall. § 8. For this purpose the Oyl of Whelps (in Our Pharmac. lib. 5. cap. 2. sect. 41.) which is one of PARÆUS his secrets, is admirable: So also the Oyls of Hemp seed and of Linseed profit much. Or this R Oyls of Hempseed and Linseed, A. ʒiij. Oyls of Lillies, Roses, Hypericon, Mastick,

A. ʒij. Oyls of Turpentine ʒj. Oyl of Camphir ʒj. mix them. Or this. R Turpentine ʒiij. Frankincense, Mastick, A. ʒss. Myrrh ʒij. Saffron ʒj. Oyl of Hypericon ʒij. yolks of Eggs N°. ij. mix them. Or this. R Venice Turpentine ʒj. Galbanum ʒij. Calves Marrow ʒss. powder of Scorzonera and Scordium Roots, Treacle, A. ʒj. Oyl of Hypericon ʒss. make an Oyntment. Or this, which is yet stronger. R Birthwort roots ʒss. Amber, Mastick, Mummy, Euphorbium, A. ʒj. Turpentine, Uguentum Egyptiacum, ʒss. Saffron ʒj. yolks of Eggs N°. j. Oyl of Elder q. s. make an Oyntment. Or this. R Honey, Turpentine, A. ʒiij. Alum, Crocus Martis, A. ʒij. roots of round Birthwort, Aloes, A. ʒss. mix them: Or lastly this. R Turpentine, Honey, A. ʒiij. yolks of Eggs N°. viij. boyl to the thicknes of a Linement. § 9. But if a Gangreen nigh at hand be feared, you must apply this. R Oyls of Hempseed and Linseed, Tar, Turpentine, Galbanum, A. ʒij. Oyl of Roses, Mastick, Frankincense, Niter, Sal Armoniack, A. ʒj. Oyls of Worms and Turpentine, powder of Earthworms, white Vitrol, Verdigrise Camphir, A. ʒj. Alum ʒss. mix, and over a gentle Fire make an Oyntment. § 10. But if there be a greater fear of a Gangreen, you may (if the Nerve hinder not) add to the former a little Mercury præcipitate; Or use this. R Basilicon majus ʒij. fresh Butter ʒj. præcipitate ʒij. mix them. § 11. You ought also to stop the flux of Humors by applying this defensive, to parts remote to the Wound. R Fine Bole, Sanguis Draconis, A. ʒj. Frankincense,

red

red Roses, A. \mathfrak{z} ss. whites of Eggs No. iij. Vinegar of Roses q. s. mix for a Cataplasim. § 12. Upon the wounded part to ease pain, and cherish the native heat, and help forward Suppuration, apply this Pultise. \mathcal{R} Roots of Althæa, Comfrey, A. \mathfrak{z} j. flowers of Camomil, Melilot, Hypericon, A. M ss. Tops of Wormwood M j. boyl them in Milk q. s. to sefiness; then add meal of Althæa roots, of Barly and of Beans, A. \mathfrak{z} jss. Wine q. s. boyl a walm again, and make a Cataplasim. § 13. At first dress but once a day, for in these Wounds there seldom appears much matter before the third and fourth day; after this oftner, but the quantity of the Sanies must direct you: wherein you must be sure to purge often, and to exhibit proper wound Drinks, for in no wounds are they more necessary. § 14. The Pus being bred, you must now come to cleansing, which you may do with this: \mathcal{R} Meal of Orribus, and Lupins, A. \mathfrak{z} j. Frankincense, Myrrh, Aloes, A. \mathfrak{z} ss. Orrice root \mathfrak{z} ij. juyce of Smallege and Wormwood, A. \mathfrak{z} ij. Turpentine \mathfrak{z} ij. Honey \mathfrak{z} j. mix and boyl to the consumption of the Juyces: but if the wound be fouler than ordinary apply this \mathcal{R} . Orribus meal \mathfrak{z} j. Myrrh, Aloes, Frankincense A ss. Turpentine, juyce of Smallege, A. \mathfrak{z} ij. Unguentum Egyptiacum \mathfrak{z} ss. mix them. § 15. If the Sinus be very deep, wash it (by help of a Syring) with decoction of Centory, Sanicle, Birthwort, Orrice and Frankincense, made with Wine, and sweetned with Honey. § 16. Lastly, the wound being cleansed, you must incarnate and Cicatrice after the manner of o-

ther Ulcers. § 17. If there be a Fracture of the bones withal, whereby they are broken into splinters, you must seek for their Cure in the proper Chapter of Fractures. And here we cannot but advertise the young Artift, that because Gunshot wounds with Fractures of the bones are apt to excite acute Pains, Convulsions, yea and a Gangreen it self; they hasten all they can to Amputation, or cutting off of the whole Member; which, although it may be done, yet nevertheless is not to be put in practise, so long as there is any the least hopes left of a Cure; seeing that Nature is wont, even in these Wounds also (as it were) to work Miracles.

XLVII. Wounds of the Head in particular.

§ 1. If the Tumor suddenly vanishing; a Feaver happen the Eleventh or Fourteenth day; Or if the wound be little and the Inflammation great: Or if the Inflammation cease on the fifth day, and the wound appears livid and black; Or if there be a Feaver, with Vomiting and Convulsions; there is in all these cases great danger: If they befall Children, Cacoehymick or diseased persons, the Cure will be difficult, If the Wound appearing black or livid, the Reason shall fail, and the Tongue be black and dry, death is to be expected. § 2. In the Cure you must use convenient purging; and where the Pericranium is hurt, the stich either by Needle or plaister is not convenient; fat things hurt, but drying and strengthening Medicaments are good

good; as, *R Aloes, Mastick, Myrrh, A. 3 ss. Dragons Blood ʒij. fine Bole ʒj. Venice Turpentine ʒij. Honey of Roses ʒss. mix and make an Unguent, which may serve if the Skull it self be bare.* § 3. *Over the Wound you may lay, Emplastrum de Gummi Elemi, de Mastiche, de Meliloto simplex, or Sticticum Paracelsi: and give inwardly for some days, Venice Treacle ad ʒij. in Treacle water, to comfort and defend the Heart.* § 4. *If there be a Fever with Inflammation of the whole Head, Neck, Shoulders and Breast; the lips of the Wound looking livid, with a pricking pain, and sharp, stinking and virulent Sanies, flowing forth; first wash the place well with some warm wine, in which Mithridate has been dissolved, then apply pledgets, dipt in an Oyntment made of juice of Onyons, Mithridate, Spirit of Wine and Oyl of Scorpions: Or this Plaster of Barbets. R Onions boyled ʒiiij. Mithridate ʒss. Goats Dung ʒj. Angelica Roots in powder ʒjss. Oyl of Scorpions ʒjss. Honey, Wax, A q. s. mix and make an Emplaster: Or this R Galbanum, Sagapenum, Opoponax, Assa-Fetida, Myrrh, Pepper, Sulphur, A. ʒvi. Pidgeons and Ducks-Dung, A. ʒj. Mummy ʒss. powder of Comfrey Roots ʒiiij. Oyl of Hypericon. q. s. mix and make an Emplaster. These Emplasters extract the Virulency out of the Wound, ease Pain, abate the Inflammation, and corroborates the part: the latter of them also incarnates.*

XLVIII. Wounds of the Temporal Muscles.

§ 1. *They are accompanied with*

dreadful Symptoms, and often mortal: If they be by Puncture or transverse and deep, they are dangerous, especially if accompanied with Vomiting, Convulsion, and deep Slumbering. By reason the part is in continual motion they are hard to Cure. § 2. *If it be a puncture, shave off the Hair, and anoint with Oleum Catalorum, which is of admirable use, applying over it Sticticum Crollij vel Mynscher, then dress it, and take care of it as of Wounds of the Nerves.* § 3. *If the Wounds be transverse or longways, you must use Sutures, and Cure it after the ordinary way.*

XLIX. Wounds of the Brain and Dura Mater. § 1. *They are accompanied with pain of the Meninges, and a great Flux of Blood, with other symptoms, which are for the most part mortal.* § 2. *The pain is eased wonderfully by application of Oyls of Roses, of Violets or of Myrries warm, or warm Pigeons Blood.* § 3. *The Flux of blood (which in this case is generally very great) is to be stoppt with this Powder. R Aloes, Mastick, Myrrh, Rhubarb, red Coral prepared, Sanguis Draconis, Hares-Hair cut small, A ʒj: make it into a fine Powder; or in place hereof, you may use Galens powder of Thrualoets; afterwards you may use honey of Roses mixt with spirit of Wine, or Oyl of Mastick, with which you may also incarnate; or with Syrup of dyed Roses.* § 4. *The Flux of blood and pain being ceased, the following Medicines are to be used, and not left off, till the Pus begins to flow plentifully. R Oyl of Turpentine ʒij. spirit of Wine;*

Sy-

Syrup of Wormwood, A. ʒj. mix them. § 5. If there be an Inflammation and Tumor, use convenient purging, a slender dyer, and a Fomentation with generous Wine, after anoynt with Oyl of Roses: if the Tumor yet increaseth the Skuill must be opened wider: If it comes to suppuration (known by many white spots) then carefully open the *Dura mater* (Barbet does apprehend no danger in taking off a part of this Membrane when purrified, so that it can be come at, with a pair of Scissers, without hurt of the *Sinus* or *Pia mater*) then apply Hony of Roses, mixt with Syrup of dried Roses. § 6. If there be blackness from violence of the contusion (which lasts not above four days) use Honey or Oyl of Roses, or the yolk of an Egg, mixt with *Aqua Vitæ* & *pulvis cephalicus*. If it comes from congealed blood, then R *Aqua Vitæ* ʒij s. powder of *Kermes* ʒij. *Saffron* ʒj. *Sarcocolla* ʒiij. *Honey of Roses* ʒiij ss. gently boyl them, and use it till the blackness be gon. § 7. If a Gangreen or putrefaction should happen; (known in part by the strong scent of the Pus) use this following Liniment. R *Aqua Vitæ*, white wine, A. ʒjss. *Syrup of Wormwood*, *Hony of Roses*, A. ʒij. *Unguentum Egyptiacum* ʒjss. *Aloes*, *Myrrh*, *Sarcocol*, A. ʒj. mix and boyl gently and strain for use. If these things prevail not, but that the Tumor increaseth, the Eyes grow fiery, and the sick tosses and raves; you may pronounce Death neer at hand. § 8. So also, if a Nerve be hurt, Or if blood or some humor obstructs the beginning of the

Nerves: Or if after a few days the putried blood, produces a Feaver and Delirium.

L. Wounds of the *Pia mater*:

§ 1. Whatever we have said in the former section, as to the pain Inflammation and Flux of Blood, is to be understood here, except in the use of Oyls of all sorts, although they be drying, least a putrefaction of the Brain be caused. § 2. Some commend this: R *Turpentine*, *Honey of Roses*, powder of *Mastick*, A. ʒij. *Aqua Vitæ* ʒij. mix them: But *Honey of Roses* and *Spirit of Wine*, are said to be beyond all other things. § 3. Barbet commends drying *Cephalick Pouders* and *Aquapendens*, this R. *Millet meal* ʒss. *Oleum Hispanicum* ʒj. *Michridate* ʒvj. *Balsam of Peru* ʒiij. *Aqua Vitæ* ʒvj. *Oleum Vitrioli* ʒjss. mix them. It dries much and resists putrefaction: So also *Balsam of Peru*, with as much Oyl of *Hypericon* mixt with it: but in a word these Wounds are for the most part mortal.

LI. Wounds of the Face.

§ 1. These are to be healed with care to avoid deformity; not being any ways so dangerous as the former. § 2. The dry suture or stitch is here to be used: but if you have not the sticking Oyntment, you must use the other, especially in men, where the hair may hinder the dry Suture: on the Wound you may strew the incarnative powder, or apply some *Vulnerary Balsam*, of which the *Balsamum Arcæi* is none of the meanest. § 3. Heal it not up too hastily, but apply about the Wound a deflative, least there should be Pain, Inflammation or Tumor, which

which being neer the Eye, may cause blindness. § 4. Wounds of the Ears and Lips are to be stitched; the latter after the manner of a Hair Lip. § 5. Wounds of the Nose, if the part remains on, are to be stitched with a Needle: If the part be cut quite off, it will never unite any more, so the wound must be healed defective. If there be a fracture in the Bone of the upper part; what is raised up is to be depressed, and what is depressed inwards to be thrust outward, by the help of a fit pin of Wood, Ivory, or Silver, wrapped up in Linnen: afterwards put in a pipe or quill, and keep it there till the Cure is performed: outwardly apply *Emplastrum Catagmaticum*: if there be no corruption of the Bone, it will be well in about fourteen days.

LII. Wounds of the Eyes.

§ 1. In these Wounds you must forbear all Unctuous things, bind up the whole Eye as the Wounded, and place the head upright, if the Lid be wounded, take heed they both grow not together. § 2. If there be a flux of Blood, you may stop it with things formerly directed, or with this: *R Trochisci albi Rhasis, Tutia prepared, sine Aloes A. ℥j. Mucilage of the Seeds of Fleawort and Tragacanth A. ℥ij. red Wine ℥ij. Rose and Plantane Water A. ℥iiij. mix and make a Collyrium.* § 3. If there be great pain, inject *Womans Breast Milk warm*; Or this, *R Breast Milk ℥iiij. Honey ℥j. Whites of Eggs N° I. mix and anoint with; or add to the former at § 2. Opium gr. xvj.*

§ 4. Outwardly apply this Cataplasm. *R Rotten Apples ℥ij. Meal of Linseed ℥ss. Mucilage of Fleawort seeds ℥ij. Opium ℥℔. Yolks of Eggs q. s. make all into a Cataplasm and apply it.*

LIII. Wounds of the Wind pipe and Gullet.

§ 1. If they be deep there is eminent Danger; so also if they be transverse in the Trachea, but not altogether so desperate, unless a Fever, Gangreen or Sphacelus follow, for then they are Mortal: those between the Rings are curable. § 2. If the Wound penetrates through, you may know it by holding a Candle before the mouth thereof, and making the Patient hold his Breath, which will then blow upon the Candle. § 3. Cleanse the Wound by washing it with S. V. Anoint with Liniment of *Arcaeus* mixt with Oyl of Mastich, Myrtles or Hypericon, laying over it *Sticticum Crollij, vel Oppodeldoch wart. ℥ij.* § 4. Inwardly you may gargle with *Gargarismus ad Inflammationes, vel de Prunella, vel de Glycyrrhiza Mynsichti*, or with that de *Auricula Judæ*; all which see in Our Pharm. lib. 5. cap. 1. sect. 29. 30. 32. 34. § 5. While these things are in use let him lie on his Back, and often take Lohoch sanum, or Lohoch of Fox Lungs. § 6. In Wounds of the Gullet, there is difficulty of breathing and swallowing, Hickers, Vomiting: if they be deep the meat comes out: if wholly divided, or cut transverse and the Wound be great, its incurable. § 7. That which is curable is to be stitched, leaving an Orifice for the PUS to run forth

forth in the depending part; and then Cure it as the former; or you may first apply this. *R. Honey of Roses, Syrup of dried Roses, A. ʒij. fine Bole ʒj. Mastich, Sanguis Draconis A. ʒij. half the Yolk of an Egg: Balsam of Peru, Venice Turpentine, A. q. s. mix them.*

LIV. Wounds of the Breast and Heart.

§ 1. Wounds of the Breast either penetrate or not: if they penetrate not, they are to be Cured as other ordinary Wounds.

§ 2. If they penetrate (which may be known by holding a lighted Candle neer them) without the hurt of any Internal part, the danger is the less; These for the most part are left to be cured by Nature, which here (as in some other Cases) does Miracles.

§ 3. If there is a flux of Blood, Revulsive means is commonly used: If you Tent the Wound, you may dip the Tents in this Liniment: Take Oyls of Mastich and of the Fir Tree A. ʒj. Manna of Frankincense ʒij. Roots of Tormentil, Comfrey A. ʒj. Saffron ʒj. Earthworms ʒss. Whitewine ʒij. boyl to the Consumption of the Wine. Or this, Take Turpentine or Balsam of Peru ʒʒ. Oyl of Hypericon ʒj. Yolk of one Egg, mix and make a Liniment. § 4. Wounds of the Heart are for the most part Mortal; and those which penetrate into the left Ventricle (the Storehouse and Treasury of the Blood and Vital Spirits) kill suddenly, the Wounded seldom living above six, twelve or twenty hours. If Wounded into the right Ventricle the Sick may live

sometime longer; Sennertus relates a Story of a Soldier wounded into the right Ventricle, who lived above fifteen days after it. If the Wound terminates in the Substance of the Heart, the Sick may yet live a longer time; but this will also destroy the person at last. § 5. They are known by much Blood leaping forth, Universal Tremblings, weak Pulse, cold Sweats, Swoonings and Convulsions: when the Limbs grow cold, Death is at hand.

LV. Wounds of the Lungs.

§ 1. They are known by the Color of the Blood which is yellowish and frothy; there is a Cough, difficulty of Breathing, pain on the Wounded side; yet lying thereon is the more ease: if the Wound is great and deep, the great Vessels being hurt, whence there is great effusion of Blood; Or if the Branches of the *Aspera Arteria* be hurt (by which more breath comes through the Wound than through the Mouth) they are Mortal: In other Cases, although part of the Substance of the Lungs has been cut off: the Patient has done well, and lived many years after. § 2. In the Cure, you must avoid all salt, acid and biting things: Inwardly exhibit a Traumatick Diet, and such things as withall may digest and cleanse. § 3. Outwardly, if there be no weight on the Midriff, nor Fever, nor spitting of Blood, drop into the Wound Balsam of Peru, or that of *Arcam* mixt with Oyl of Hypericon, or *Balsamum Nervinum Schroderi*; over which apply

ly *Emplastrum Diacalciteos.*

§ 4. If there is much Blood in the Cavity, after it is come forth use a *Flamula* dipt in the white of an Egg, the greater part hanging out of the Wound, which you may continue for 40 days.

§ 5. If yet evil Symptoms do remain, use a Silver or Lead pipe, which you may remove, when the Wound runs matter digested and little: if you think convenient, you may gently inject a Traumatick Decoction, blood warm: § 6. During all the time that the Wound runs (or as much as may be) let the Sick be in bed with the Wound downward, for its more easy discharge of the matter: at other times put in the Pipe; and on it lay a sponge wrung out of S.V. which keeps the Air out, and extracts the Pus: Or this, *Rx pure Rosin ℥ss. Oyls of Bays and Turpentine A. ʒj. Gum Elemi ʒiij. dissolve (over a gentle fire) the Gum and Rosin, then mix the Turpentine: spread it on Leather and lay it over the Pipe, which change once a day in Winter, and twice a day in Summer: and no ways inferior to this is the Balsam of Peru mixt with Schroders Balsamum Nervinum: The remaining part of the Cure pursue as in an Empyema.*

LVI. Wounds of the Back, and Spinal Marrow.

§ 1. These the neerer the Neck, are the more dangerous, seeing that the Spinal marrow (in the parts situate under the Brain) discharge the functions of the Brain as its Vicegerent, and hath a Substance and Membranes in common with

the Brain: in the same manner as the Wounds of the Brain, so may the Wounds of the Spinal Marrow be said to be Mortal; viz. if it be Wounded in the Superior part. § 2. For those parts being hurt, the sense and motion of all the parts under the head which receive their Nerves from the Spinal marrow, as also the Influx of the Animal Spirits into the whole Body may be hurt and taken away, and consequently the very breathing it self abolished; but these Wounds are more especially inflicted upon the Neck, in the interiour part. § 3. But if the Wounds be inflicted on the Spinal Marrow or some lower place, they are not necessarily Mortal, but the Sick may by Chance escape. § 4. If the Wound passes to the Bone, you must dress it as a Wound of the head. § 5. If the Vertebrae be in part divided, put in this, *Rx Oleum Hyperici, yolks of Eggs, A. ʒj. Turpentine ʒss. Saffron ʒi. mix them. Or this, Rx Balsamum Nervinum Schroderei, Balsam of Peru, A. ʒj. Spirit of Wine ʒvi. Yolk of one Egg, mix them.* § 6: After anoint the whole Backbone with this. *Rx Oyls of Worms, of Swallows, of Whelps, of Hypericon, of Amber, Schroders Nerve Balsam, A. ʒj. mix them, and Embrocate the whole Back with this: Rx Oyl of Chamamill, Oyl of Worms, A. ʒj. Oyl of Juniper berries ʒiij. mix them.* § 7. If there be a Contusion withal, you must cure it as you do other bruises.

LVII. Wounds of the Belly.

§ 1. If all the Tunicks be divi-

ded

ded, and the Wound penetrate into the Cavity it self, it ought to be united by a Stitch, a little Orifice being left, through which a Tent is to be put (as you see occasion) dipt in Balsamum verum, mixt with Schroders Nerve Balsam. § 2. If the Guts come out, you must reduce them, and then cure it as a Rupture. § 3. If the Caul comes forth, and by reason of the cold Air it becomes black, livid or hard; bind it neer the sound part, cut it off, letting the rest fall of it self, leaving the Thread out: but if it be not alkered, but is warm, thrust it in and stitch up the Wound, thus; first thrusting a Needle through the Skin and Muscles to the Peritoneum, but not touching of it, then from within, outwards pass through all, and tye it: make another Stitch an Inch farther, leaving an Orifice to put in a Tent. § 4. Embrocate the Abdomen and parts pained, with this. Take Oyls of Worms, Scorpions, Roses, Camomil, Dill A. ʒi. Oyls of Amber and Juniper berries A. ʒiij. Camphir ʒss. mix them. § 5. If the matter falls into the Belly, it will be known by a pain and heaviness of the Groins: anoint with the former; if that does no good but you see that it will Apostemate, you must in due time open it, and cure it as another Tumor.

LVIII. Wounds of the Stomach.

§ 1. If the Stomach is wounded, there is Fainting, Swoonings, Convulsions, Vomiting, Hiccough, &c.

§ 2. These Wounds are left for the most part to Nature, which here, as in many other Internal

Wounds, doth (as it were) Miracles. § 3. But if the Wound happens in the upper Orifice, or in the Nerves distributed through the Stomach, it is Mortal.

§ 4. If the Wound be large, the Lips must be united by a stitch, leaving a little Orifice, through which a Tent may be put; which Tent let not enter the Wound of the Stomach, but only touch it. § 5. These Tents you may dip in the Liment at sect.

54. § 3. Anoint the parts adjacent with the King of Englands Oynment; and over all apply Sticlicum Paracelsi: Inwardly give Mastich in powder, mixt with Honey of Roses, and Elixir Proprietatis.

LIX. Wounds of the Liver and Spleen.

§ 1. Wounds of the Liver are most commonly made on the right side; they are accompanied with a great flux of Blood: the Sides draw towards the Back-bone; oft-times ejecting Blood by Stool and Urine; there's a pricking pain up to the Neck, and down to the Bladder, Face is Wan, and the Sick desires to lye on his Belly. § 2. If the Spleen is Wounded, black Blood flows from the left side, that side, with the Stomach being hard, great Thirst and Pain reaching to the Neck. § 3. All Wounds of the Liver and Spleen with hurt of the Vessels are Mortal; otherwise there may be hopes of Cure; yea though part of their Substance be lost or cut off. § 4. To the Wounds themselves you must apply drying and Astringent Medicines. R Honey of Roses,

Syrup of dried Roses A. ʒj. Pulvis dysentericus vel Sperniolæ Crollij ʒi. Be fine Bole, Aloes A. ʒj. Oyl of Wax q. s. make a Liniment.

§ 5. Inwardly, you may give the Pulvis dysentericus Crollij in a little Syrup of Roses; strengthening the Internal Viscera with Our Confect of Alkermes. § 6. If the Belly be bound, you must daily use Emollient Clysters.

LX. Wounds of the Guts.

§ 1. Wounds of the small Guts, sometimes (though seldom) may be cured; those of the great Guts are more easy. § 2. If the small Guts be Wounded, the Chyle, and sometimes the Meat and Drink comes forth, there is Vomiting Cholera, great Pain and a Fever; a Hiccough, Gripping of the Belly, and hardness of the Hypochondries. § 3. If the great Guts be wounded, the ordure comes forth at the Wound, or the Scent at least, if the Belly be bound. § 3. The wound in the Gut must be straight with the Glovers stitch; then being well cleansed with warm Wine, strew upon it this powder: R Aloes, Frankincense, Mastich, Mummy, Dragons blood, A. ʒj. make a fine powder: this done, restore the Gut into its place. § 4. Then stick up the Abdomen, leaving a place for a Tent or Pipe; foment the parts adjacent with S.V. anoint the Wound with the King of Englands Ointment, and over all lay Emplastrum Sticticum: Inwardly give powder of Mastich mixt with Honey or Conserve of red Roses; or Elixir Proprietatis Paracelsi.

LXI. Wounds of the Reins.

§ 1. These are not mortal though they pass to the Cavity itself; but are difficultly and slowly cured: but for the most part an Ulcer follows, that waits the whole Kidney, though the Sick may continue with it many years.

§ 2. There is great Thirst, suppression of Urine, pissing Blood, and pain reaching to the Groins. If the Wound is in the fleshy part, then Blood flows out, and there is a suppression of Urine: but if it pass to the Cavity, the Blood is more serous, and it also flows out with the Urine.

§ 3. Inwardly you may give Pulvis Sperniolæ Crollij, Trochisci Alkakengi, Gordonij, de Carabe de Terra Sigillata, fine Bole with Turpentine, Pulvis ex chelis Cancrorum, and Wound Drinks. § 4. Outwardly anoint with the KING of Englands Ointment; strew over the Wound fine powder of Aloes and Mastich, and over all lay Sticticum Paracelsi: Or you may drop into the Wound Balsam of Peru or of Arcaeus; laying over it the Emplaster at Sect. LV. § 6.

LXII. Wounds of the Bladder.

§ 1. They are known by the Urine coming forth little and bloody: if the Wound be in the bottom of the Bladder, Urine falls into the Cavity of the Abdomen, procuring a kind of Dropsy: the pain extends to the Groin and Stones in Men.

§ 2. These are seldom perfectly cured; there remaining for the most part a Fistula: but if in the Neck of the Bladder, they are often Cured. § 3. These Wounds are

are Cured as Wounds of the Reins
aforegoing : but Inwardly you
may exhibit morning and even-
ing these Pills. *R Mans bones*
Calcined, Troches of Alkengi, A.
3ij. Talk burnt, Chalck, A. 3j.
Mummy 3ij. Venice Turpentine
a little boyled, q. s. make them
into a Mass, of which form lit-
tle Pills about the bigness of
Peates of which give fix at a time
twice a day as aforesaid : you
may also exhibit them in like
manner in Wounds of the
Reins.

LXIII. Wounds of the Yard.

§ 1. Wounds of the Yard are ve-
ry dangerous, and for the most
part Mortal ; yet it has been cut
off in some who have done well.
§ 2. This Ointment is excellent in
Order to the Cure, if it may be:
R wash Ceruse 3ss. Tragacanth
3ij. Myrrh, Litharge A. 3j ss.
Sarcocol, prepared Tutty A. 3j. Oyl
of Rose q. s. make an Ointment.
§ 3. If there be an Inflammation
withal, it is taken away as other
Inflammations. § 4. If an Exter-
nal Ulcer happens ; the Cure
must be performed both by In-
ternal and External means, lest
it should contract a Malignity,
and degenerate into Sphacelus,
you may anoint with this:
R Litharge, burnt Lead, A. 3 ss.
Aloes, Turia prepared, flowers of
Sulphur, A. 3ij. Lapis Hematitidis,
Talk Calcined, A. 3j. Oyl of Roses,
Quick-silver, A. 3ij ss. Wax q. s.
make an Ointment. § 5. If the
Ulcer yields not to this by reason
of its foulness, Take Verdigrise
ss. S. V. 3j. Rose and Plantane
waters, A. 3ij. White Wine 3iv. boyl
a little and wash therewith : if

the Ulcer be yet stubborn, you
may add a little Mercury præci-
pitate. § 6. A Sphacelus admits
of no Cure but cutting off, lest it
should creep inwardly, and so
kill the Sick.

LXIV. Wounds of the Fingers and Toes.

§ 1. These are so be Cured as o-
ther simple Wounds: but if the Ten-
dons be hurt, Care is to be taken,
lest a Palsy follows. § 2. You
must be careful that the Bandage be
not too hard. § 3. Pile not the
Probe in too deep, nor too often.
§ 4. Place the Hands and Fingers
upright, not depending. § 5. Be-
ware of a Sphacelus, with which
these parts are easily affected: it is
known, By no matter appearing
in due time: By the Lips of the
Wound being dry, or yielding
but little and thin moisture ; By
the Heat, Puffation and Red-
ness, which is greater than in the
fleshy parts, By the Lips turned
in, becoming livid and at length
black. § 6. In the Cure, you must
apply such things as we have for-
merly set down to stop a Gangreen.

LXV. Ecchymoma, a Contu- sion or simple Bruise.

§ 1. A Contusion or Bruise is
called Ecchymoma or Ecchymo-
sis: but we thought good to make
Ecchymosis as Genus to Gangre-
na and Sphacelus, because their
outward appearance so little dif-
fers from a Contusion or Bruise:
Ecchymoma we still retain in its
ancient acceptation. § 2. More-
over we were moved to the former
transfession of the Name, not only
from the outward appearance,
but from the nature also of the
Disease; and the aptness of Ec-
chymoma

chymoma to degenerate into Gangrena still retaining its own Colour, which is commonly black, blew, yellow or livid. § 3. Therefore by Ecchymoma we intend a bruise only: by Ecchymosis, Gangrena or Sphacelus. § 4. Ecchymoma a Contusion or Bruise is an effusion of Blood by force under the skin, causing a black, blew, yellow or livid colour. § 5. The Cause is violence or force; the way and manner of the effusion is either by Anastomasis, Diapedesis, or Diuresis. § 6. If the blood be thin, and the Tumor not very great, it may be dissolved; otherwise it must be opened for fear of a Gangreen. § 7. In Order to the Cure Revulsion is first necessary, then Defensives and Repellers that may prevent and impede the Influx of Blood to the part affected. Such are fine Bole, Terra Sigillata, Earth of Lemnos, Dragons Blood, Roses, Myrtles, Cypress Nuts, Acorns, Galls, Balaustians, Roots of Sanicle, Comfrey. R fine Bole ℥iij. Chalk ℥j. boyl them in Vinegar, then add powder of red Roses, Meal of Comfrey or Confound A. ℥j. Oyl of Myrtles q. s. make a Cataplasim. Or R Rose water, whites of Eggs, A. beat them well together, and with hurds of Flax dist therein, apply them. Or R whites of Eggs N^o iv, Oyls of Myrtles and Roses ana ℥j. fine Bole, Dragons Blood ana ℥ss. Cypress nuts ℥ij. Vinegar q. s. mix for a Cataplasim. § 8. If the Contusion be great, Or made by falling from an high place; Or the Blood is not only gotten under the skin, in the External parts, but is also poured forth into the

more inward, through a Rupture of some of the Vessels; by which oft times Inflammations, vehement pains Feavers, Convulsions and the like dangerous Symptoms are excited, causing sometimes Death it self: In this Case you must hinder the clotting of the Blood as much as may be, or speedily dissolve that which is coagulated by exhibiting inwardly Spirit of Sal Armoniack: and outwardly fomenting the parts with Volatile Salt, or flowers of Sal Armoniack dissolved in S.V. or other proper Vehicle. § 9. Moreover you must with all possible speed give proper purges, such as are made of Rheubarb and Sena; and make what Evacuations you can by Stool, Urine and Sweat, thereby to prevent a putridness. In this Case Sperma Ceti, Mummy Tinctures of Coral and Antimony are of force: Juyces of Scabious, Hypericon, Sorrel, Citrons, &c. Or this powder R Rheubarb, sealed Earth, fine Bole, Mummy, ana ℥j. make a powder: Dose ℥j. at a time. § 10. If the Body is bound, give Emollient Clysters; and inwardly exhibit Unguentum portabile, Or Balsamum Stomachicum Regium, Or Lucatellus's Balsam; all which are Emollient, Discutient, Anodyne and Healing. § 11. Outwardly you must endeavour to digest, by anointing 3 or 4 days with Oyl of Roses, and applying over it a Cataplasim of the Root of Solomons Seal made with Wine: Or this, R Barly and Bean Meal, A. ℥ij. powder of Roses ℥j. boyl them in Red wine: then add Oyl of Roses ℥j. Vinegar ℥ss. and one whole Egg, mix

mix and make a Cataplasim.
 § 12. In the former there is Astringents mixt with the Discussives: Now you must use Digestives alone; as R Ung. Dialthæa ℥ iij. Turpentine ℥ ij. Oyls of Earthworms, Camomil and Dill, A. ℥ j. Meal of Fenugreek, powder of red Roses, Myrtles, A. ℥ ss. Saffron ℥ j. make a Liniment; or with Wax an Unguent. If Digesters help not, you must apply Cupping Glasses. § 13. If there be no hope of Dissension, you must apply Suppuratives of a middle nature, between strong and weak: When it is ripened, you must open the Apostem as we have formerly taught, lest the Pus corrupt the Neighbouring parts, or make hollow Fistula's: But it will be better to open the same, before it is perfectly ripe, rather than stay too long, lest Death or some in-

curable Malady succeed: and the reason is because (in the Judgments of the most Learned men) a perfect Suppuration is not to be expected. § 14. But if you perceive the natural heat to be extinguish'd, and that a Gangreen or Mortification is like or near to ensue, you must immediately scarify, and if need be, apply Cupping Glasses to the part; then foment it with warm Vinegar, or the Decoction of Roots of Radishes, Vipers Grass, Aron or Solomons Seal in red Wine; then apply this Cataplasim. R Southernwood, Cummin seed, Camomil flowers, A. ℥ j, juyce of Aron, enough to make a Cataplasim. The Cataplasim being removed, apply over the Wound Emplast. Diachylon Ireatum. Inwardly give Spirit of Sal Armoniack, and good wound Drinks.

CHAP. XXVI. Of ULCERS.

I. Of a Simple Ulcer, called Hælas & Ulcus.

§ 1. **A**N Ulcer is a Solution of Unity with Dissolution of Magnitude putrefied in a soft part. § 2. The Cause is from sharp and corrosive humors excited, either inwardly, as Cholera, Flegm, Serum, Melancholy and other Malign humors; or externally as by burning, Corrosive Medicines, sweat of one

infected with the Itch, Leprosy or Pox. § 3. Ulcers that have continued long, and are now become inveterate, are not to be cured without much danger, unless the Body be first of all carefully purged, and a good course of Diet be observed: If the Ulcer reach to some Noble part of exquisite sense, naturally full of moisture; Or if it follows other Diseases, wherein Nature drives the vitious humor to that part: Or, if the Ul-

ced. be great, because the external Air can work upon it: Or if it be round, because the lips are hardly reunited: Or if it tend to look green and black, because it shews a danger of extinguishing the natural heat: Or if it run with much Sanies thin, pale, lead coloured, black and stinking: Or if the Spleen be in fault, because from thence thick and melancholy humors are sent to the Ulcer hindring its healing; in all these Cases the Ulcer is very difficult to be cured. § 4. *The Indications.* You must rectify the Cacochymy by due purging and a fit Diet: You must mature the imperfect matter by digestives: you must cleanse it from its filth by Abstersives: Then you must Incarnate with Sarcoticks: and lastly produce the Cicatrize by Epuloticks. § 5. *For the first Intention you may purge with Pilula Panchymagogæ, Species Cathartice, or Panchymagogen Vegetabile: and if the Ulcer is inveterate you may mix therewith gr. ij. iij. or jv. of the true Turpethum Minerate, or of pure Quick-silver killed with flowers of Sulphur: after the taking of which for 3 or 4 times purge with a strong Tincture of Sina in S.V. or with the Tinctura Cathartica clofsei; Exhibit for a Sweat Tincture or Diaphoretick of Antimony, or Tincture of Tarrar and Bezoar Minerale in fragrant Wine, or in the Sudorifick Tincture of Paracelsus. Or which is best of all, you may sweat with half a spoonful, more or less of our Liqueur Vita given in a Glass of Sack: giving continually through the whole Cure for a*

constant Diet some proper *Tran-*
smatick Decoction. § 6. *For the second Intention you may apply any of these Digestives; Oyls of Roses, Mastich, Eggs, fresh Butter, Gum Elemi, Turpentine, Frankincense, Mastich, Meal of Wheat, Barly, Fennugreek, Yolks of Eggs, Honey, Basilicon majus & minus; Or this, Be of the Dissolution of Gum Guajasi in S.V. ℞ij. Juices of Centory the less, Wormwood, Agrimony, A. ℞j. fine Myrrh, Meal of Orobus, A. ℞ss. Honey of Roses ℞ij, Venice Turpentine q.s. make a Liniment. This or Basilicon you may lay upon Lint, and apply it either alone, or with a little precipitate ℞i. ad ℞i. But if the Ulcer be very putrid, or there is a Rheumatism withal, you must avoid Digestives. About the part apply repellors to hinder a fluxion, applying over all Diapalma, or de Mimus: round about the Ulcer apply this Repercussive and Defensative. Be fine Bole, Vinegar, juyce of Plantane, A. libss. Oyl of Roses ℞iv. White of one Egg, mix them all in a Mortar, lay it thick on Cap paper and apply it. § 7. *The third intention is to cleanse with abstersives, such are Frankincense, Rosin per Rosin, Turpentine, Oyl of Mastich, juyce of Smallage, &c. Sennertus thinks it not good to use Suppuratives (usually called Digestives) alone, but to mix them with Abstersives; however to vary the Medicines according to the Constitution. This following use in a soft and moist body: Take Oyl of Roses ℞j. Turpentine ℞ij. Yolk of one Egg, mix them. Or this which is dryer: Take Pine Rosin ℞j. Oyl of Mastich**

3vj. powder of Frankincense, 3j. mix them. Or this, Take Honey of Roses ʒj. Turpentine ʒls. Juice of Smallage ʒj. Powder of Frankincense, Bay flower, A. q.s mix them. Or this Take Honey ʒjv. Turpentine ʒij. boy at a gentle fire to the thickness of an Oyntment; remove from the fire, and add the Yolk of one Egg: if the Ulcer is very foul to ʒj. of the former Oyntments, you may add ʒj of precipitate: for this purpose also Unguentum Apostolorum is of excellent use. § 8. The fourth Intention is to Incarnate with Sarcotick, such as we have mentioned cap. 24. sect. 31. where you have a great plenty both of Simples and Compounds, which you may use with this Observation, that the hotter of them may be applied in the colder seasons; the cooler of them in the hotter seasons: The Sarcotick of Sennertius. R Myrrh, Mastick, Aloes, A. ʒls. Frankincense, Turpentine, A. ʒj. Colophony ʒls. Gum Elemi ʒij. mix and make an Unguent. Or this of Barbet: R Uag. Fuscum Warrʒij, Litharge, A. ʒij. Colophony, Myrrh, Aloes, Mastick, Balsicon, A. ʒiv. Turpentine 3vj. Gum Elemi ʒij. Oyl of Roses q. s. make an Oyntment. But in hard and dry bodies, and where a hard flesh is to be generated, the form of the Sarcotick had best be in powder, and so to be sprinkled upon the Ulcer: as R Frankincense ʒiv. Dragons blood, Colophony A. ʒij. make a fine powder. Or this: R Frankincense ʒiv. Aloes ʒij. Dragons blood, Sarcocol, ana. ʒj. make a fine powder. § 9. The fifth and last

intention, is to close up the Ulcer with a Cicatrize by Epuloticks. These you have enumerated at sect. 32. cap. 24. foregoing, where among the Compounds there specified, there is none yet thought to exceed. These Epuloticks ought to be used before the Ulcer be wholly filled up with flesh; lest before the Cicatrize should be produced, the flesh should receive too great an Increase. § 10. When the Ulcer begins to incarnate, you may dress it 2 or 3 days only with dry Lint; and then 2 or 3 days with Oyntment, then with Lint again, keeping over it Emplastrum Diacalciteos. § 11. Suffer not the Ulcer to be round, for so long it will never heal: and if the Lips of it grow thick, scarify them with a Lancet, to let out the gross Blood which hinders the Healing. Heitherto of an Ulcer Sanious, plane or deep without Symptoms.

II. Of an Ulcer with Distemper.

§ 1. An Ulcer with Distemper is either of heat, coldness, moisture or dryness. § 2. In a hot distemper the flesh in the Ulcer is red again, also the edges of it, and there is great heat and pain, from the Acrimony of the matter. § 3. It arises from too hot Air, great quantity of swaths or cloths, and over hot Medicaments, or whatsoever may cause an Inflammation. § 4. In a cold distemperature the edges of the Ulcer and the flesh of the same is sift, white, and where things succeed not well, livid. § 5. It arises from too cold Air, or cold Medicaments, or a cold habit of the

Body. § 6. In a dry distemper, the lips of the Ulcer are dry and hard, and the Excrements proceeding there from are but few. § 7. It arises from a drying Air, too dry a habit of Body, and over drying Medicaments. § 8. In a moist distemper, the flesh is soft and loose, often encreasing, with too great a plenty of matter. § 9. It arises from Air, Medicaments, and a habit of Body too moist. § 10. Ulcers with a distemper, hot, or cold, or moist are cured without much difficulty: But Ulcers with a dry distemper, are very hard of Cure. § 11. The Indications of the Cure are the same with the former; save, you must add first an alteration of the Habit of the Body, or of the Ulcer, or of both, as you shall see need. § 12. The Cure of an Ulcer with a hot distemper. Here you must use coolers, pain asswagers and binders, which you may impose, not only upon the Ulcer it self, but also upon the parts adjacent round about: such are waters, juices, Oyls and Oyntments of Roses, Plantane, Endive, Vinegar, Sanders, fine Bole, Nightshade, burnt Lead, Cadmia, Saccharum Saturni, Turpentine, Whites of Eggs, Oyls of Roses, Violets, Myrtles, Unguentum Rosatum, Refrigerans Galeni, Album Camphoratum, of Ceruse, of Nightshade, of Sanders, &c. § 13. An Ulcer with a cold distemper. Here the Ulcer and Distemper may be cured both at one and the same time with Healers. Such are Oyls of Hypericon, of Spicknard, of Flower de luce, of Camomil, of Rue,

of Dill, Syrup and Honey of Roses, Rosin of the Fir and Larch-tree, Spirit of Wine, Gerrot of Bettony. Upon the adjacent parts use a fomentation of generous Wine in which Rosemary, Sage, Rue, Hyssop, Wormwood, Organy, Mint, Bay-leaves and Camomil has been Decocted; adding a little S.V. § 14. An Ulcer with a dry distemper. Here in you must neglect the Ulcer, and apply yourself wholly to the distemper. Foment the part with warm Water and Oyl mixt together, which may be best done with a Sponge: then foment with Oyl alone: Or lay on this Cataplasme. *Rx Mallow leaves boyled to softness* ℥i ss. *Barly and Wheat meal, A.* ℥ss. *Honey of Roses* ℥ij. *Oyl Olive* ℥ss. *mix them.* Or this Unguent. *Rx juice of Mallows* ℥j. *Oyl Olive* ℥ij. *Wax q. s.* melt them together. But if there be an *Airrophy* withall, the Sick must eat nourishing Meats: and the Nutrimment must be drawn to the part by Dropaces. § 15. An Ulcer with a moist distemper. The Sarcotick, must here be stronger than in a simple Ulcer; such are Cyperus roots, Smiths dust, Horehound, Hypericon, Wormwood, Sage, Dittany, burnt Vitriol, burnt Lead, Red Lead, Litharge, Ceruse, Saccharum Saturni, Frankincense, Mastich, Emplastrum Gryseum, de Minio, &c. if the Ulcer be but a little moist to the stronger sort of the former you may add Oyl, Rosin, and Wax. § 16. Lastly, the distemper being removed, cure it in a

Simple Ulcer, with Sarcoticks and Epuloticks.

III. Of an Ulcer with a Flux of humors.

§ 1. The cure of an Ulcer with Distemper, but without matter, we have declared in the former Section : We now come to shew the Cure of an Ulcer with Distemper, with matter, or with a flux of humors. § 2. It is

known from the swelling which is seen in the lips and bordering parts of the Ulcer ; by the pain, if nervous parts be affected ; by plenty of Excrements, greater than the Magnitude of the Ulcer should naturally yield. § 3. It arises from humors either sent from the whole Body, in such as are

Cacochemical ; or from a part, where the Ulcer and parts adjacent are ill disposed. § 4. It is cured by Purging and Revulsion ; by Interception ; by Repercussion ; by Sarcoticks ; and by Epuloticks.

§ 5. By purging you must hinder the generating of the vitious humor, and if the flux be by default of the Liver or Spleen you must rectify it : for this purpose suit your purge to the Constitution and humor abounding ; and continually administer some notable Traumatick drink ; or the Juyce of Parietary. § 6. Among the revulsive Aids and Remedies, Issues have the first and chiefest place, being made in the contrary part, for that they evacuate the matter substantially : and these have place indeed in all inveterate and old Ulcers : least the Ulcers being healed, the humor should regurgitate into the Veins, and so rush into the

more Noble parts. § 7. Interceptives or Defensives: strengthen and shut up the Vessels, and withal drive back the humor ; they are formed out of such as are dry and astringent ; such are fine Bole, Dragons Blood, red Roses, Balustians, Pomgranate Peels, Myrtle, Acorns and their Cups, Alum with the White of an Egg, Oyls of Myrtles, of Roses, Austere Wine, Astringent Waters. § 8. But to the Ulcer it self you must apply Repercussives, such are Alum water, Plantane, Cinquefoil and Rose-waters, Roots of Sweet Cyperus, anointing the adjacent parts with the Unguent of Bole. § 9. As for Sarcoticks and Epuloticks, we have formerly named enough : here the Sarcoticks ought to be Vehement, and of the strongest kind ; not Oily and Fat, least they more loosen and moisten the part. § 10. Guido in Tract. 4. Doct. 1. Cap. 2. advises to lay on a plate of Lead, with a hole bored through it, but it will be more effectual if it be anointed with Quick-silver ; or you may dress it with Diapompholigos.

IV. Of an Ulcer sordid, foul and putrid.

§ 1. Ulcers sordid and putrid differ only in degrees : that is sordid which (proceeding from an afflux of moist humors) becomes foul with a thick and stinky excrement : That is a putrid Ulcer, when the said Excrement comes forth with a noisom smell like unto that of a dead Carcase, and withal Putrefies and Corrupts the flesh that lies next under it ; and contaminates the softer parts

parts. § 2. The Proximate causes of this Ulcer are depraved malignant humors, in a Body Cacochymical, receiving a Putridness from External heat and moisture: Or by reason of the too much use of moist, Unctuous, and Emplastick Medicaments: Or from the use of Vehement and over strong abstersives. § 3. This Ulcer is known by the flabby soft flesh, and great abundance of viscous and clammy humors, wherein the lively colour of the part is vanished: if it comes of Unctuous Medicaments, it then appears white, and that whiteness goes round about the whole Ulcer like a Border: if from strong abstersives, it grows hollow, and every day more red than other, a small quantity of thin hot Quittor flowing forth: if it be putrid it is known by the grievous stinking smell. § 4. A *Jordia* Ulcer, if it be not suddenly helped becomes putrid: if the putridness be increased in the Ulcer, at length a Gangreen and Sphacelation follows. § 5. The Body must be first purged from vitious humors, and a Traumatick decoction continually exhibited. § 6. Then you must cleanse with very absterfive Medicaments, as juyces of Smallage, of Wormwood; Meal of Barly and Orobis, Myrrh, and Honey of Roses, but more especially with Spirit of Wine, which does exceedingly benefit in cleansing all putrid Ulcers, which is therefore to be mixed with the other Medicaments. R. Roots of round Birthwort ℥j. Wormwood, Conservy the less, Agrimony, A. M. j. boyl them in Wine: to the straining

add, Rind of the Frankincense tree, Myrrh, A. ℥ss. boyl in Wine again, strain and add Meal of Orobis ℥ss. powder of Myrrh ℥ij. S. V. ℥j. Honey of Roses ℥ij. Turpentine enough to make a Liniment. Or this; R. Oil of Roses, ℥bj. red precipitate ℥j. Orobis meal and Turpentine, enough to make a Liniment. § 8. If it be from the use of Unctuous Medicaments, you may remedy it with the milder sort of abstersives. § 9. If it be from the use of too strong abstersives, you must impose milder, as Unguent Diapompholigos: if that will not do, you may impose *Apsolorum*, or *Agripitacum*: Or this, Take Barly water ℥bj. Honey of Roses ℥ii. mix them. Or this, Take Turpentine, Honey of Roses, ℥ss. Orobis meal ℥ii. Myrrh ℥i. powder of Orrice ℥ss. mix them. § 10. If the Ulcer is putrid, wash it with Oxycrate, Lye, Brine, upon which impose meal of Orobis of round Birthwort, Squils boyled in Wine, and mixed with Honey, &c. § 11. If with the putridness it be hollow, you must use some cooling Unguent, as of Bole Armoniack, least an afflux of humors be excited by hot and biting things. § 12. If you fear it should degenerate into a Gangreen, you must use stronger things, as Balsamum Amarum, Oxymel, Lixivium of Quicklime, round Birthwort root, Tobacco, the ablution of Mercurius Dulcis in Lime water, sublimate dissolved in Water, Flowers or Volatile Salt of Armoniack, Butter of S, &c.

V. Of an Ulcer with Tumors.

§ 1. The cause of these tumors is the same with that in the afflux of

of humors; but according to the nature of the humor, such is the Variety of the Tumor, whether it be Phlegmon, Erysipelas, Oedema, or Cancer. § 2. The signs of each tumor, and what danger they threaten, you may see in their respective places. § 3. The Tumor must be Cured as we have declared in the Chapters of Tumors, yet not neglecting the Ulcer: you must first have respect to the vicious humors, than to the part affected, there apply Medicaments, which may either discuss the humor which is the cause of the Tumor, or else bring it to Suppuration. § 4. In a Phlegmon or Inflammation apply a Cataplasim made of Quinces boyled with the ponder of Myrtle, or Barly Meal, In the augment of the Ulcer you may add Camomil Flowers and Bean meal. In the State Mallows, Marsh-Mallows, Meal of Linseed and Fœnugreek. If it tends towards suppuration, you must apply Ripe-ners. § 5. If the Tumor be an Erysipelas, you may Bath or impose thereon Waters of Eldersflowers, Sowthistles, or Nighshade: now here if you rashly impose things which stop the Pores, great Blisters are often excited, with malignant long continuing Ulcers, especially in the Thighs, which many times degenerate into a Gangreen: if it should so happen you may apply *Diaporphologos*, to which if you please, you may add a little Sugar of Saturn. § 6. If the Tumor be Oedematous, apply this Cataplasim, Take leaves of Althæa, Malows, A.Mj. boyl them in Lye to softness: beat them well, then add Powder of Al-

thæa root ʒij. Camomil Flowers ʒx. Oyl of white Lillys q.s. make a Cataplasim. § 7. If there be a Cancer, we shall speak to that hereafter in a Section by itself: and as to the rest which we might here speak concerning the aforementioned tumors, you may seek it out in the Chapter and Sections, where they are treated of particularly by name.

VI. Of an Ulcer with Proud flesh.

§ 1. This the Greeks call Hyper-sarcosis it comes from much Blood, flowing to the part affected; or weakness of the Sarcotick, not being so drying as it should be, in which latter case the flesh is loose and spungy. § 2. If it comes from too much Blood, the sick must use fasting and a spare diet, and to the Ulcer drying Medicaments are to be imposed. § 3. If it be from the use of weak Sarcoticks, you must use a stronger sort of Abstersives, and such as may produce a Cicatrize: even *Sepricks* if occasion be. § 4. Such are spung Burnt, drying Liniments, rind of Frankincense, Galls, Aloes, Tutia, burnt Alum. The stronger Medicaments are Verdigrise, Chalcitis, Mercury precipitate and sublimate. § 5. In the Toes, by reason of the Nails growing in, there is often Luxuriant Flesh, so that a Man can neither put on his Shoes, nor go without pain; In this Case burnt Alum alone will take away the said flesh. § 6. Whensoever there is need but of little drying, you may impose thereon drying Liniments, or this Powder. Take Galls, Pomgranate peels, Spung burnt, ana. make a Powder to strew on. § 7. Or you may use this

this Green water following, which you may sprinkle upon the proud Flesh, or impose it thereon by Liniments; it takes away the said flesh without any pain at all, and skins the Ulcer. The green Water: Take Roch Alum, Verdigrise or Green Vitriol, A. ʒij. Wine ℥xviii. boyl till ℥iv are wasted: strain it, to which add Camphir ʒi. dissolved in S.V. ʒj. if you would have a stronger you may use Tinctura seu Aqua Aluminosa Magistralis (in Our Pharm. lib. 4. cap. 7. sect. II.) or this Powder, Take Galls, Balaustrians, A. ʒj. Dragons Blood, Ceruse, Verdigrise, A. ʒss. Burnt Alum, Myrrh, Frankincense, A. ʒj. make them into a Powder.

VII. Of an Ulcer Callous.

§ 1. The lips of the Ulcer being callous and wan, are caused by those things that dry too much, or by the cold Air; or by afflux of hot humors. § 2. In order to a Cure, the calous or hardness is first to be taken away, and the exulcerated part is to be reduced unto its natural state. § 3. If the hardness be not great, it may be taken away by Emollients, as Mucilage of Linseed and Fænugreek seeds; Oyls of Almonds and Earthworms, Hens and Ducks Fat, Diachylon Simple, and such like; or this: R. Mucilages of Althea seed, and Fænugreek, A. ʒiiij. Oyls of sweet Almonds and white Lillyes, A. ʒvj. Turpentine ʒij. Wax q. s. make an Unguent. § 4. If these things will not do, the best way will be to cut it off even to the sound flesh, for then the Ulcer will be most speedily cured; it is the advise of Galen in Arte Medendi, lib. 4. cap.

2. and indeed this way the pain will be much the shorter. § 5. But if the sick will not endure incision nor burning by an actual cautery, you must then use Corrosives, such as the green water in the former Section, or the powder there specified; but the strongest of remedies are the Oyls of Sulphur and Vitriol. § 6. Yet nevertheless whether the work is done by incision or corrosion, you must be very cautious in the Nervous parts; and defensive Medicaments are to be applied to the places adjacent, lest pain or an afflux of humors be excited.

VIII. Of an Ulcer discoloured.

§ 1. An Ulcer wan, livid, leaden coloured or black, is caused through cold air; Or afflux of Humors; Or want of natural heat, by too hard binding. § 2. It is cured first by scarification, that the vicious blood may be drawn forth, which you may dry with Spunges. § 3. Then in the next place you must use strong drying Medicaments, such as the green water and powder at Sect. VI. § 7. aforesaid. § 4. Lastly, you may skin with Pulvis Astringens, used with some drying Liniment, Oyntment, or Plaster.

IX. Of an Ulcer cavernous or hollow.

§ 1. This is when the Quister being over-long determined, eats it self holes, and as it were Conney burroughs. § 2. The Cure we shall shew you out of Franciscus Valeriola, lib. 5. obs. 1. and 7. wherein you are to observe chiefly three things, First, That in these kind of Ulcers it will be necessary to open

open a Sinus or hole in the lower part of the hollownes; that away and passage may be made in a depending place, for the issuing forth of the Pus or matter.

§ 3. Secondly, *That such a compressive ligature be used (to prevent the coming of a Fistula) which may begin from the bottom of the Wound or Ulcer, and end in the Orifice thereof: this always provided that by how much the neerer it comes unto the Orifice, by so much the looser it be.* § 4.

Thirdly, *That by reason of the foulness of these Siquous Ulcers, the spirit of wine is very fitly mingled with other Medicaments, because it has in it an Excellent property and vertue, to cleanse and purify in such like cases.* § 5. *First of all (saith Valeriola) after universals, and a special regard had to the whole Body, the Ulcer must be cleansed of its thin, Ichorous excrements; without which it can neither be filled up with flesh, nor agglutinated: R Broth of whole Barly lbij. Honey of Roses ʒvj. mix and inject with a Syring, it cleanses without any sharpness.* § 6. *But if the Ulcer be very foul, you must use stronger cleansers, by mixing with the former Unguentum Aegyptiacum, and a small proportion of Aqua Vita: if after six, eight, or ten days this prevails nothing, you must use this.* R Wood and Bark of Guajacum powdered small, A. ʒij. round Birthwort, Centory the less, Wormwood, Agrimony, Horse-tail; leaves of Olives, Myrtles, Pimpernel, greater Consound, A. Mj. bark of Frankincense tree, Myrrh, Sarcocol, A. ʒj. sweet scented red Wine lbij. Cla-

rified Honey ʒiiij. make a decoction and strain it for an Injection.

At the time of using of it, put in to so much as you use S.V. or Aqua Vita ʒj. to have you a mixture most powerful and efficacious, in cleansing, drying and healing the most sordid Ulcer, and that without any biting.

§ 7. *But if to the aforesaid Decoction you add Aqua Vita lbij. and distil in a Glass Alembick, in. B.M. you will have a most admirable Liquor, not only for cleansing the said hollow, sordid Ulcers, but also for conglutinating and closing them safely up. For truly, great and admirable is the power of S. V. or Aqua Vita, in cleansing and glewing together of Ulcers, and especially those of the nervous parts, so that we know nothing that is better for that purpose.* § 8. *When you see fit to fill the Ulcer up with Flesh, you may use this Sarcotick.*

R Leaves of Plantane Mij. of Agrimony, Betony, Herb Robert, Cinkfoil, A. Mj. Tops of Wormwood Pj. of both Consounds, Horse-rail, Ceterach, Hypericon, A. Mss. make a Decoction in water q. s. at the end of the Decoction, add red astringent Wine lbij. red Roses, Myrtle leaves, whole Barly, A. Pij. boyl a little and strain; of which take lbij. to which add Bean Meal, Frankincense, Mastick, Sarcocol, Pine Rosin, Myrrh, round Birthwort, A. ʒj. Meal of Orobis, of Florentine Orrice, A. ʒss. Honey of Roses ʒiiij. mix them for an Injection: then put in long Tents (according to the hollownes) dipt in some Sarcotick

Unguent, as the Oyntment of Licharge, and within the Ulcer apply this Sarcotick Powder. *R* Fine Aloes ʒij. Frankincence, Rind of the same Tree, Myrrh, Sarcocol, Florentine Orrice, A. ʒj. make a fine powder, with which fill up the hollow cavities of the Ulcer. § 9. Then to produce the cicatrice, Foment the Ulcer and parts adjacent, with the Decoctions at § 6. or 8. then cast in this Epulotick Decoction. *R* Leaves of Plantane, Ivy, red Roses, A. Pj. grains of Myrtle Pjss. leaves and flowers of Centory the lefs, A. Pj. Roch Alum ʒj. Pongranate Rinds ʒjss. make a Decoction in a sufficient quantity of Red Wine. § 10. If all this will not do, you must lay open the Cavities by incision, and fasten cupping Glasses thereupon, to draw out the filthy matter, or instead of Cupping Glasses, cleanse it with Oxymel, Unguentum Valeriolæ, or Ægyptiacum, Apostolorum, or Nicotianæ.

X. Of an Ulcer with Worms.

§ 1. Worms are for the most part bred in Ulcers sordid and foul, and are known by sight; if the Ulcer be wide: Or otherwise, if they cannot be seen, they are known by a biting pricking pain, and a sense or kind of motion, with a certain filthy stink. § 2. If the worms be open to the Eye, you are to take them forth, with a convenient Instrument. § 3. But if they stick so fast that they cannot be drawn forth, or he bid that they cannot be seen, they are then to be killed with Medicaments, which may withal take away putridness, and the too great

humidity of the part. § 4. For this purpose, among simples these are chief, Wormwood, Horehound, Dittany, Fern, Scordium, Featherfew, Centory the lefs, Peach leaves, Gentian, Lupins, Aloes, Myrrh, Bulls Gall. § 5. Among Compounds this is Excellent: *R* Meal of Lupins, Bulls Gall, A. ʒij. Elixir Proprietatis, ʒij. Honey q.s. make a Liniment: Or this, *R* Aloes, meal of Orobus, A. ʒij. Bulls Gall ʒij. Myrrh, Verdigrise, A. ʒj. Honey q.s. make a Liniment. Or this, *R* Gentian ʒis. white Helbor ʒij. Dittany, Wormwood, Centory min. A. M fs. S. V. q.s. make a strong Tincture: strain, and to every ʒij. put of Elixir Proprietatis ʒis. Or kill them with Our Balsamum Amarum scalding hot.

XI. Of an Ulcer Varicose, or with varices.

§ 1. Touching the Cure of Varix we have already spoken, Cap. 23. Sect. XXVII. where observe if the Varix be very great, its removal may cause Death. § 2. If it be joyned with an Ulcer, the Ulcer cannot be cured till the Varix is removed, as Galen teacheth *Artē Medendi, Lib. 4. Cap. 2.* Therefore in the first place, you must have respect to the Varix. § 3. The Varix being removed, you must cure it as a simple Ulcer, wherein first Purging and a Traumatick diet ought to be instituted, and continued, for four or five Months, yea for some Months after the Ulcer is well. § 4. If in cutting out of the Varix, there should be some unknown way, for the blood to fall into the Vein, which you had not beforehand secu-

ed, whereby an Hemorrhage does succeed, you must stop it with *Pulvis astringens*, and the white of an Egg, with fitting bandage, the swath-band being also first wet in *Oxycrate*; then heal it after the manner of an ordinary Wound.

XII. Of an Ulcer with Pain.

§ 1. If an Ulcer be painful it ought immediately to be mitigated, because it may attract or cause an afflux of Humors; Or augment the Ulcer; Or cause an Inflammation or Erysipelas to arise. § 2. This Pain for the most part arises from a sharp and corroding humor: and therefore the pain is to be taken away either by taking away the cause which is the Humor; or else by the help of Anodyns and Narcoticks. § 3. The taking away of the Cause (which is the safest way) is done by due and fit purgation, and a good Traumatick Diet. § 4. Outwardly, you may apply Anodynes, such are yolks of Eggs, Saffron, Oyl of Roses, Turpentine, Pine Rosin, out of which you may frame Liniments to apply on the Ulcer it self: but, about the circuit of the Ulcer, you may use, Hens, Goose, and Ducks Grease; Mucillages of Linseed, Foenugreek and Marsh Mallows; Oyls of Sweet Almonds, Camomil, Dill, Violets, &c. § 5. If the pain be extreme, you ought to fit the Medecament to the Cause, which being for the most part from hot and sharp Humors, you ought to apply cooling things; as juyce or waters of Plantane, Night-shade, Henbane, Houfleeck, Roses, with which and Mucilage of Mallows, Marsh Mallows, Plantane, Houf-

leeck, Oyls of Roses, and whites of Eggs, you may make Cataplasms to be laid on: Or, you may use *Unguentum Album Camphoratum*. § 6. If yet all this avails nothing, but necessity urges to use Narcoticks, then the Oyl of Poppies, of Henbane, of Nightshade, of Mandrake, of Frogs, or the Juyce of Henbane, Houfleeck, *Saccharum Saturni*, Tincture of Opium, all or any of these may be applied with Milk.

XIII. Of an Ulcer with foulness of Bones, or Carious.

§ 1. The Signs by which the foulness or rottenness of the Bones is to be known, as also the Prognosticks or Judgment thereof, we have in especial declared in *Lib. 1. Cap. 50. Sect. 22.* and *Lib. 2. Cap. 37. Sect. 18.* to which we refer you: the Method of Cure follows. § 2. Besides the Indications of the Ulcer, the rottenness of the bone shews that the corrupted part must be taken away; for what is dead, can by no means be restored: in the Flesh it is called *Sphacelus*, in the bone Rottenness. § 3. You are first to wipe the Ulcer clean, and so make the bone bare (if it be yet covered) by cutting off the Flesh, or dividing it, according to the length of the part, and doctus of the Fibres, not transverse, or crossways. § 4. But yet never theless if there be Nerves, Muscles, Tendons, Arteries, or the greater Veins, Section or cutting cannot be administered; but in this case, the bone is as much as may be to be cleansed, with a Gentian or Rape root, tenderly conveyed into the Ul-

Ulcer; and the Flesh likewise that lyeth on top of the Bone, may be consumed with a Caustick or potential Caustery, nearly conveyed to the part; and so the bone may be made bare, as Issues are wont to be excited. § 5. *The bone being made bare, you must remove what is rotten of it, either by Medicaments, or by Chyrurgery.* § 6. *Such things as sepeare the corrupt bone, from the sound, ought to be very drying, to suck up the superfluous humidity in the corrupt part, and dry the very bone that is sound; the milder sort of which are, the root of Sow-Fennel, white Briony, Flower-de-luce, Myrrh, Aloes, Alumi. The stronger are these, round Birthwort roots, roots of Water Dragon, of Al-heal the Bark, Bark of the Pine tree, Pumice Stone burnt, mineral Chrysocol, Lime, Calcanthum, Vitriol burnt, Ashes of the Fig-tree, Spirit of Wine, Spirit of Niter, Oyls of Vitriol, Sulphur and Antimony, Scales of Brasse, Salt of Tartar, Euphorbium, (than which Fallopius saith, that he never found any thing more Excellent, or that would sooner take away the Caries or rottenness) Tincture of Euphorbium in Spirit of Wine.* § 7. *Of Compounds we offer these, R Euphorbium ʒj. Mummy, Sarcocol, A. ʒss. mix, and make a powder. Or this R round Birthwort, Orrice, Myrrh, Aloes, bark of Al-heal, and of the Pine Tree, Scales of Brasse, Ana; make a powder, which mixt with Hony to a Liniment. Or this: R roots of round Birthwort, of Bryony, of Hogs-Fennel, Or-*

rice, A. ʒj. Euphorbium ʒj. make a Powder, which strew on the bone. Or this: R Yellow Sulphur ʒij. melt it by a gentle Fire, to what put Salt of Tartar ʒss. in powder: mix by continual stirring, till they are cold: then powder and make an Oyl per deliquium, upon a Marble Stone, with which anoint the corrupted bone. Or this: R roots of round Birthwort, of Orrice, of Hog-Fennel, A. ʒiiij. bark of the Pine, Myrrh, Aloes, powder of Earthworms, Agarick, A. ʒij. scales of Brasse, Euphorbium, A. ʒj. Honey of Roses, q. s. make a Liniment. Or this R. Birthwort long and round, roots of Briony, Hog-fennel, of Orrice, A. ʒss. Centory the less, bark of the Pine, A. ʒij. Aloes, Flower of Brasse, A. ʒjss. with S. V. q. s. Extract a Tincture. Or Lastly this: R. Juice ofcelandine ʒijss, S. V. ʒi ss. Myrrh, Aloes. A. ʒ ij. white Vitriol ʒij. mix them for an Injection. § 8. *If Medicaments will not do (which you may know in the space of 35. or 40. days, for Nature very slowly makes a separation of the corrupted bones;) you must then have recourse unto Chyrurgery, more especially if the Corruption of the Bone is more deep, and not in the Superficies.* § 9. *And herein you must either scrape the Bone, if the Corruption be small, with an Instrument for that purpose, called the Scraping Instrument; Or if the foulness be great, by shaving or paring, or perforation with the Wimble or Auger; Or else by burning with an Actual Caustery, which last is the chiefest*

remedy, for consuming of all the Excrementitious humidity.

§ 10. But in applying of these Causteries, you must be cautious, lest you burn the flesh that lyes near; to prevent which, you must let them down to the Bone through Iron Pipes, of which you must have several in a readiness, because they are subject to heat. § 11. The bone being scaled, and the rottenness removed, strew upon the place some Sarcotick or cephalick powder, fill the place affected with Flesh, and heal it as another Ulcer.

XIV. Of an Ulcer Cacoethick, or malignant.

§ 1. This is one of the kinds of Ulcers called Depascens, or spreading; Or Dysepulote, hard to heal. By some it is called Chyronium from Chyron, who found first the way of curing of it. By others it is called Telephium, from Telephus a person long troubled with such an Ulcer: so that Chyronian or Telephian Ulcers are only so called, either from him who first instituted the Cure; Or from the person first known to be affected therewith. § 2. Their Original is from a melancholy humor mixt with Atrabilis: Or from one or both of them conjoined with Malignity and Virulency. § 3. It is known in that the lips are ill coloured, for the most part red and itching, and although the Ulcer is never so gently wiped, yet it is with pain: the parts round about it swell up; the Ulcer is from day to day dilated, and not only the skin, but the flesh that lyes under it is eaten through. § 4. As

to the Cure, it is scarcely to be accomplished, without the Cause be first removed, and the whole Mass of Blood purified, which must be done with manifold and continued purging, often sweating, and a constant taking of some good Traumatick Drinks, that so the Body may be emptied of all the vitious Humors. § 5. To the Ulcer you must apply such things as are cold, dry and astringent, and yet withal discussive, or mixt with discussives, such are Plantane, Nightshade, Bramble-tops, red Roses, Cypress Nuts, Pomgranate Flowers and Rinds: Bark of Franckincense, Mastick, Tutty, Ceruse, Litharge, red Lead, burnt Lead, Brimstone, Vitriol, Mercury, Unguent Aegyptiacum, Fuscum Wurtzij, Diapompholigos, Emplastrum de Plumbo, de Minio, Gryseum, de ranis cum Mercurio. § 6. and therefore in the first place, Foment the Ulcer with this Decoction: R. Plantane leaves Mj. red Roses, Balauſtians, Pomgranate rinds, A. ʒj. Myrtle Berrses, Sumach, burnt Alum, A. ʒss. boyl in red Wine, q. s. and wash the Ulcer well therewith. § 7. The Ulcer being washed lay over it Diapompholigos, Or Unguentum Album Camphoratum. Or this; R. prepared Tutty, fine Bole, A. ʒss. burnt Lead, washed, Ceruse, A. ʒj. and with either Oyl of Roses and Wax, Or Unguentum Aegyptiacum, q. s. (according as the occasion is) make an Oyntment. A Pledget dipt in Spirit of Vitriol, or Oyl of Sulphur, though very sharp, yet are second to none; but beware you touch no Nerve

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with it. So also a Decoction of Oak leaves with Myrrh, Frankincense and Alum. § 8. Lastly, *Impose over all Emplastrum de Ranis*, with double or treble Mercury. § 9. But you must note, that in these kind of Ulcers; First, that extreme Medicines are to be changed every three or four days, although the best, because Nature rejects them being longer used. Secondly, that they ought not to be dress'd above once or twice a day, except the matter be very sharp. Thirdly, that Mercuriates cannot be safely used without continual purging.

XV. Of an Ulcer Phagedenick.

§ 1. It is so called from the Greek word *Phagēiv* from eating; because it corrodes and eats through the parts adjacent. Some take it for a Tumor, others for an Ulcer, but it is indeed properly an Ulcer, which eats and devours without putridness, all the adjacent parts, accompanied with a Tumor surrounding the Flesh. § 2. It is caused generally from adust Choler, or Melancholy; or else from yellow Choler with salt slegm, and a ferous or watery humor mixt therewith; which humor is not so thin, as to produce only an Herpes; nor yet so thick as to produce a Cancer. Now this humor comes either from some part affected with a hot and dry distemper; Or else is made adust by some præternatural heat and dryness in the part affected. § 3. These Ulcers are difficult to be cured, and are sometimes more malignant than at other times. If

they be conjoyned with a hot and dry Distemper of the Liver or with the French-Pox, they are to be cured, only with much difficulty: if they be not rightly and speedily healed, they often degenerate into an exulcerated Cancer. § 4. In order to the Cure, a Dyet is first to be prescribed, as may not generate adust humors; and then those bad Humors which are in the Body, are to be evacuated with proper Medicines; for which purpose, there is scarcely a better to be used than *Confectio Hamech*, mixt with (in each Dose) gr. xv. ℥j. or ʒss of *Mercurius Dulcis*, and this to be repeated twice a week. § 5. For Topicks, you must avoid repellors and Mercuriates, and whatsoever is used it ought to be changed every third or fourth day. You may wash with drying Decoctions, as this: *Rx Oak and Plantane leaves, red Roses, A. M. ss. Balauftians, Pomegranate peels, Cyprus Nuts, A. ʒss. red Wine, q. s. make a Decoction;* with which wash the Ulcer, then apply *Unguentum Fuscum Wurtzii*, or some such like, till the Ulcer ceases spreading, appears red, and is well cleansed; after this, with *Unguentum Nicotiana* you may perfect the Cure.

XVI. Of the Ulcer Nome, or Cancerous, an Ulcer eating with putridness.

§ 1. This is an eating Ulcer, but differs from the former, because it eats with great putrefaction; moving forwards from the diseased and unsound parts, to those which are whole and sound; adding to them malign matter from the un-

unsound, so that its name arises not from the substance of the thing declared, but from the matter accessory, which is to feed, as *Galen* witnesseth, *Metb. Medendi, lib. 5. cap. 4.* For *Nome* signifies an eating or devouring putridness, although that the Ulcer creeps but slowly. § 2. *This Ulcer is distinguished from Phagedena*, (which the more Ignorant Physicians call the ambulative or walking Ulcer :) For as *Phagedena* eats through the parts and flesh lying underneath, and that are about it, and that profoundly, yet it always is with a Tumor, and the corrosion is only from a malign quality and acrimony of the Humor: whereas *Nome*, although it eats, and that deeply and profoundly, yet it is always without a Tumor, and the corrosion is from a certain putrified Humor: and herein it differs from *Herpes*, for in an *Herpes*, the skin is only corroded; in a *Nome*, the skin is not only eaten, but the flesh also. § 3. *As to the Cure, the Method in Sect. XIV. and XV. is in part to be used here, varying it, according to the discretion of the Artist.* But some perform the Cure, as in the Cure of a Cancer, see Cap. XXIV. Sect. XV. to which we refer you: others commend the Sublimate of white Arsenick, because it mortifies in one day Cancers, Fistula's, and other strange and malign Ulcers, applying round about Defensatives. § 4. *When the Cancer is mortified, and the stink and virulency gone, heal it as another Ulcer.* § 5. *Some commend this as an Experiment: R*

Salt M. j. Sorrel M. viij. beat them well together in a Mortar, to which put water enough to cover three fingers breadth over, boyl to the consumption of the half, to which add burnt Alum ʒiij. white Vitriol in powder ʒj. mix, and wash therewith twice a day. § 6. *Inwardly give this following Dyer. R* Pauls Betony, Winter-green, Fennel, Betony, A. M. iij. cut, bruise, and put thereto of Beer or Ale two Gallons; let them stand in a Cellar for a Week, adding Album Græcum in powder, Volatil Sal Armoniack, A. ʒiij. of this let the sick take 4 or 5 Spoonfuls, morning, noon and night.

XVII. Of an Ulcer by Burning or Scalding.

§ 1. *It is a solution of continuity, made either by fire, or burning things, causing an exulceration, sometimes in the scarff skin only, sometimes in the Skin, Flesh, Veins, Arteries, Nerves, Tendons.* § 2. *The causes are fire, any thing red hot, melted Metals, scalding Water, Oyl, Pitch, Flaming Straw, Flax, &c.* § 3. *The differences are three-fold; First, a burning, wherein there is only heat and pain in the part affected, which causeth the Scarff skin to separate from the skin except that medicines are presently applied to prevent it; here Blisters are commonly raised, which contain in them a cleer water.* § 4. *Secondly, when the skin it self is burnt, then presently a blister is raised, but no Escar made.* § 5. *Thirdly, when the subjacent Flesh is also burnt with the skin, by which the*

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skin becomes black and void of Sence, where the Eicar falling off a deep Ulcer is left. § 6. *If the Burn or Scald be small, and in a healthy Body, it is easily cured: if great and deep, it commonly leaves Scars behind it: if it penetrates into the great vessels, it generally produces a Gangreen: If it be in the Eyes or Groins, it is very dangerous; if it pierce to the Intestines, it is incurable: if it be from Lightning, it is for the most part mortal: if a hairy part be burnt, the hair never grows again there, but it remains bald.* § 7. *The Cure of a burn or scald of the first Degree: In the first place, you must endeavor to draw out the Empyreuma or fire, and that speedily, either by putting it a little neer the fire, so long as it may be endured, and that 4 or 5 times, and then fomented with warm Water, Lye, or S.V. then immediately apply to the place Salt in fine powder, or Yeast, or Soap, or Soot, or Leaven, or Salt beaten with Soap, or Salt beaten with an Onion: Or this, R. Of a raw Onion ʒjss. Salt, Venice Soap, A. ʒss. beat them well in a Mortar, to which add Oyl of Roses, q. s. and make an Unguent. Oyntment of Tobacco is also excellent in this case, so also is Unguentum album, Rubrum desiccatum, white Lilly Roots leaves of Beets, Coleworts, Hemp, Henbane, Tobacco, Hypericon, Elder, Melilot, Onions, Garlicke, Leeks, Camphir, Myrrh, Olibanum, whites of Eggs, Lard, Pigeons dung, Sheeps dung, Hens dung, Oyl of Nuts, Brine, Lye, Ceruse, Nitre, Ink, Empl.*

de minio. Or this, R. The green or middle rind of the Elder, or the buds thereof, bruise them well, boyl in fresh butter not salted, strain and keep it for use. Or this, R. Oyl of Roses ʒij. Camphir ʒij. whites N^o. iij. mix them. Or this, R. Lime, wash it twelve times in Rose water, or Spring water, mix it with fresh May Butter, Oyl of Roses, or Oyl of Hypericon, q. s. make an Oyntment. Or this, by means of which, a poor Soldier, as Barbet saith, became rich. R. Sage M. j. Plantane M. ij. fresh Butter without salt ʒvi. Hens dung fresh and the whitest ʒij. fry them together for a quarter of an hour, then press out the Oyntment for use. It is excellent in the greatest and most desperate Burnings, anointing with it often in a day, and laying over a fresh Colewort, or Plantane leaf. § 8. *If blisters are raised, open them the third day at farthest, least a Corrosion follow; but not sooner, for if they be presently opened, by reason the rawness will be naked, pain will be excited, and the Cure the longer ere it be performed. The Skin being cut, apply this Oyntment. R. Hogs-lard washed in Rose Water ʒij. yolks of three Eggs, mix and make an Unguent. Or this, R. middle bark of Elder, Oyl Olive, of each a sufficient quantity, boyl them together, strain, and to every ounce thereof, add burnt Lead, Litharge, A. ʒss. Ceruse ʒj. mix exactly in a leaden Mortar.* § 9. *The Cure of a Burn or Scald of the second degree, wherein not only Blisters are raised, but the skin is also burnt. In this case all the pustles are forthwith to be*

be cut and opened, that the hot and sharp humor may flow forth, then apply this Unguent: *R* Unguentum Basilicon, Oyl of Roses, or of Hypericon, A. $\mathfrak{z}\mathfrak{j}$. yolks of Eggs No. ij. mix them. Or this, *R* fresh Butter, Hens Grease, A. $\mathfrak{z}\mathfrak{j}$. Wax, Oyl of Lillyes, A. $\mathfrak{z}\mathfrak{ss}$. melt them together, and add Saffron $\mathfrak{z}\mathfrak{j}$. Mucilage of Quince seed $\mathfrak{z}\mathfrak{j}$. mix them. If you please, you may use Barly or Wheat meal instead of the Mucilage. § 10. For moderating the pain, let the parts adjacent be anointed with this Defensive. *R* white Wax $\mathfrak{z}\mathfrak{j}$. Oyl of Roses $\mathfrak{z}\mathfrak{ij}$. Camphir $\mathfrak{z}\mathfrak{j}$. Barly meal q. s. make an Unguent. Or this, *R* fine Bole, Dragons Blood, Balsumians, red Rles, A. $\mathfrak{z}\mathfrak{ss}$. Wax $\mathfrak{z}\mathfrak{ss}$. Oyl of Roses $\mathfrak{z}\mathfrak{ij}$. Camphir $\mathfrak{z}\mathfrak{j}$. moisten the powder with a little Vinegar, then mix them with the melted Wax and Oyl of Roses. If the party be in such violent pain, that they cannot sleep, add to either of the former Unguents Opium (dissolved in S. V. or Vinegar) $\mathfrak{z}\mathfrak{ss}$. and use (if the part be capable of it) Roulers dipt in Oxycrate; Or pickle of Coleworts made with Salt, Vinegar and Water, which excellently represses the flux of humors, eases pain, and draws out the fire. § 11. The Cure of a Burn or Scald of the third Degree. This sometimes, if it be not well looked unto, degenerates into a Gangreen or Sphacelus. In the first place then let all the Blisters and Pustles be cut, and the water contained in them be dried up, and labour that the Escar may be removed, the first or second day: if it cannot be, cut it in diverse places with an Incision

knife, that so a passage may be made, for the issuing forth of the humor, and admission of Medicaments to the affect. Immediately apply the Ointment of Alabaſter: Or this. *R* Oyl of Roses $\mathfrak{z}\mathfrak{ij}$. fresh butter without salt $\mathfrak{z}\mathfrak{j}$. mucilage of Fleawort seed, meal of Marsh mallows, A. $\mathfrak{z}\mathfrak{ss}$. Unguentum Basilicon, Soot, A. $\mathfrak{z}\mathfrak{j}$. Saffron $\mathfrak{z}\mathfrak{ss}$. make all into an Ointment. Or this, *R* Oyl of Roses, fresh Butter, Hogs-Lard, A. $\mathfrak{z}\mathfrak{j}$. yolks of two Eggs: mix them. Or this of Guilielmus Fabricius: *R* Diacalciteos $\mathfrak{z}\mathfrak{ij}$. Hens and Goose grease, A. $\mathfrak{z}\mathfrak{ss}$. melt them together, and add burnt Alum, calcined Lead, Litharge of Gold, Lapis calamaris, A. $\mathfrak{z}\mathfrak{j}$. (all bruised together in a leaden Mortar) Mucilage of Fleawort and Fœnugreek-seed, A. q. s. mix and make an Unguent. § 12. Defensive here are not so convenient, especially if there be danger of a Gangreen, because that they hinder transpiration: Now when by the Escar, that which was burnt shall be separated, the Ulcer is to be cleansed, incarnated and cicatrized, as we have before directed, in the Cure of other Ulcers: yet let not those things that you order to skin, be over-dry, least the cicatrice be unsightly and rugged. § 13. Burning with Gunpowder, (if the part be only hurt by the flame) are to be healed as other burnings: but if any of the Corns of the powder be fixed in the skin, they are to be picked forth with a Needle: if this cannot be well done, permit the Blisters to arise, for so may they the more easily be drawn forth: if after the burning

ing is quite healed, there is still some blemishes, there is to be laid on a Vesicatory of Cantharides and leaven, and the excited Blisters being cut with a pair of Scissars, the powder is to be taken forth, and the place carefully washed from its blackness, with decoction of Fœnugreek, and Camomil Flowers, and then this to be applyed. *Rx* Gum Elemi ʒj. Oyls of Eggs, of Roses, of white Lillyes, A. ʒij. Unguentum Basilicon ʒiij. *fresh Butter ʒj. make a Balsam.* But sometimes, as *Paracelsus* observes, the powder gets in so deep, as that it can by no Art be drawn forth. § 14. *Burnings by Lightning are very dangerous, because as Sennertus saith, Lightning has joyned with it a malignant and poisonous quality, manifestly perceived by its stinking and suffocating smell: therefore if any one has been blasted with Lightning, they are immediately to be put into a sweat, with powder of Bezoar Stone, Bezoar Mineral, Salt of Vipers, Venice Treacle, or Our London Treacle, Volatile Sal Armoniac, Spirit of Harts horn, Bezoar water, &c. Outwardly Bath the Pulses, Lips, Nostrils and Throat with Spirit of Rosemary, Angelica, Sage, Mint, and such like, and to the Wrists and Heart apply Cordial Epithems: but to the burnt place, an Unguent made of Onions, Leaves of Rue and Mithridate: if there be an Escar, it is speedily to be removed with an Incision Knife, and this Unguent to be applyed. Take powder of the roots of Swallow-wort, Angelica, Contra yerva, Virginian Snake-root, and Bay-berries,*

A. ʒij. leaves of Rue, Scordium Rosemary, A. ʒj. Saffron ʒj. Mithridate ʒiij. Treacle Water ʒls. Honey of Roses ʒij. mix them. If Bones be broken, you must not make use of those extraordinary Glutenous, and astringent Cataplasms (least you hinder the Transpiration of the poyson) but such only as are made of Antidotes, § 15. *If the Veins, Arteries, or Nerves should be burnt, there may be danger of an Atrophy of the part, from the hurt or straightness of the Vessels: In this case anoint with this Unguent. Take Juice of Earthworms ʒijss. Mans fat, Hens fat, Bears fat, Oyl of Whelps, A. ʒj S.V. ʒiij. mix them.* § 16. *If the Eyes are burnt or hurt, dress them immediately with womens Breast milk, or other Milk blood warm, or with Rose water, or Milk and Rose water mixt and tinged a little with Saffron; if the burning be vehement and a crust excited, foment with an Emollient Decoction, and be careful that the Eye-Lids be not drawn back, then apply the Unguent at § 13. only adding Wax instead of the Basilicon.* § 17. *If the Joynts should be burnt (in regard they are parts nervous, and indued with an exquisite sense) least there should be an afflux of humors, and so a more grievous malady thereupon, you use universal evacuations; nor must the Topicks be sharp (as those of Onions, Salt, Sope &c.) but mild and Anodyne, and such as may hinder the contraction of the Nerves, such as the Unguent at § 15. over which lay Empl. Diachylon simplex.* § 18. *If the Groins be burnt, since they*

are places moist, loose, soft, apt to receive fluxions, and to be putrified or gangreen, you must apply there things more drying than to other parts: if Blisters be not yet raised, than Unguents of Onions, Sope and Lime are very useful: if blisters be raised, let them timely and speedily be opened, apply the Unguent at § 13. mixed with a twelfth part of Myrrh and as much of Aloes; over which lay this Cataplasma. *Rx* Meals of Barly, Beans, Orobus, A. $\frac{3}{4}$ j. powder of Roses $\frac{3}{4}$ ss. Honey of Roses or Oxy-mel Simple q. s. mix them.

§ 19. If the Eye-lids, Lips, Fingers, Toes, &c. are burnt, keep a linnen cloth, or plate of Lead between them, to hinder their growing together; nor use any sharp Medicines to very tender parts. § 20. Lastly, If the burning be so great, as that there be fears of a Gangreen, you may seek out its Cure in its respective place.

XVIII. Of an Ulcer Fistulous, or a Fistula.

§ 1. The Definition, Diagnostics and Prognosticks of a Fistula we have particularly handled, lib. 1. cap. 50. sect. 21. and lib. 2. cap. 37. sect. 10. 19. 20. foregoing: yet this is particularly to be observed, that there are indeed some certain Fistula's, which ought not to be cured, viz. such as are old and inveterate, and such as are removed from the Noble parts; and such as have been long accustomed to purge and empty forth the superfluous and vitious humors: for such like Fistula's as these (in regard that they preserve men from diverse Diseases) are by no means

to be closed up, because as Hippocrates saith (in Epidem. Lib. 6. Com. 3. Text 39.) that when they are shut up, they cause very many maladies: and therefore on the contrary, if at any time they should chance to heal, they ought to be opened again. § 2. The Cure of a Fistula is either real or palliative. § 3. The real Cure. First, let a dyet be rightly instituted, and the body thoroughly purged from all superfluous humors, by Universals, both Emetick and Cathartick, as you see reason. Tragaecius prescribes this Dyet. *Rx* Agrimony p. iij. Plantane p. ii. Olive leaves p. j. cut bruise and boyl in Canary Wine, q. s. of which let the sick drink $\frac{3}{4}$ iij. or iij. every day: Or this. *Rx* Osmond royal p. iij. Gentian, p. ij. Centory, p. j. boyl in Wine q. s. which expells and drives forth broken bones. Or this. *Rx* Sanicle, Mugwort, Speedwel, Saracens confound, Winter green, A. $\frac{3}{4}$ j. Savin $\frac{3}{4}$ ss. Horsetail $\frac{3}{4}$ ss. boyl in Canary Wine q. s. This, if you would yet make stronger, you may in drinking of it, add to each Dose $\frac{3}{4}$ ss. of Crabs-Eyes prepared: for Savin and Crabs-Eyes are of singular use in expelling and driving forth corrupted Bones, Pus, putrified matter, and such like: Or this: *Rx* Saracens confound, Sanicle, Speedwel, A. $\frac{3}{4}$ j. Tormen-til roots $\frac{3}{4}$ ss. Avena, Carduus ben A: $\frac{3}{4}$ ss. boyl them in Wine, q. s. § 4. Secondly, The narrow Orrifice is to be dilated (if it be too straight), and the calous hardness and brawniness to be removed: The first may be done either by fire, or by a sharp Instrument, or more com-

modiously and without pain, by long sharp tents, made of *Gentian*, *Bryony*, *Hellebor*, *Sea-sponge*, *Birchwort roots*, *wild Rape* thoroughly dried, *Elder-pith*; for these things being put into the *Fistula*, suck up the humidity, and so swelling bigger, do by little and little dilate and widen the *Orifice*, without any pain at all. § 5. The *Callous* in the *Orifice* may be perceived at sight, but the *Callosus* in the *Sinus* it self, is to be discovered by *Instrument*. For the *Instrument* being put in, if there be little or no pain, if no blood at all issues forth, Or if a certain hardness be perceived, there is a *Callous* present: for otherwise in probing there will be great pain excited, blood will flow forth, nor will any hardness at all be perceived. § 6. Thirdly, The next thing to be done, is to remove the *Callosity*. In those that are young, whose *Flesh* is soft and tender, *Emollients* and *digestives* are sufficient to dissipate the *Callous*, with which (as you see occasion) you may mix *abstersives*. as, R *Juyces* of *Smalage* ℥ii. of *Celandine* ℥ii. of *Onions* ℥j. *Honey of Roses* ℥iiij. *Turpentine* q. s. make an *Oyntment*. Or this: R *Unguentum Nicotiana* ℥j. *Turpetum Minerale* ℥j. or instead thereof *Mercurius Dulcis sublimatus* ℥ij. mix them. Of this nature are the *Ashes* of *Figgs*, mixt with the *Fat* of a *Goose*: the *Decoction* of *Fern* roots, of *Agrimony*, of *Olive-leaves*, *Diachylon M gnum*, *Unguentum Apostolorum*. § 7. But for the most part stronger remedies to wast and consume the *Callous*

are requisite, as the roots of *Spondylium*, viz. meadow or *Cow-Parsnip*, *Asphodel* root, *Snake-weed*, *Bryony*, *Decoction* of *Lupins*, but above all the lesser *Centory*, and roots of black *Hellebor*, put in for 3 days into the *Sinus*, but this last will be dangerous, if the *Fistula* be in any part of the *Thorax* or *Chest*. R *Juyce* of blew *Flower-de-luce* root ℥j. of *Celandine* ℥ss. red *Wine* ℥vj. *Hony* ℥iiij. boyl a little, then add *Aloes*, *Myrrh*, A. ℥ss. *Litharge* ℥ij. white *Vitriol* ℥j. *Turpentine* ℥ss. mix them well: Or this, R *Unguentum Apostolorum* ℥j. *Turbith Mineral* ℥j. mix them. § 8. If yet the strongest things are required, you may use *Unguentum Egyptiacum*, *Vitriol* burnt, *præcipitate*, *Oyl* of *Sulphur*, *Troches* of *Minium*, *Chalcitis*, *Misy* and *Sory*; out of all which you may make *Compositions* at pleasure. *Celsus* in *Lib. 5. and Ægineta*, *Lib. 4. Cap. 49.* commends this. Take *Verdigrise* ℥xij. *Amm niacum* ℥ij. dissolve the *Gum* in *Vinegar*, and mix it with the *Verdigrise*. Of this: Take strong *Lye* ℥iiij. *Decoction* of *Lupins* ℥j. *Alum* ℥ss. *Honey of Roses* strained, ℥jss. mix them; if you would have it yet stronger, add *Mercury præcipitate* ℥ss. *Barbet* in his *Chyrurgery Lib. 3. Cap. 5.* commends this as a very excellent thing. Take powder of *Bryony roots* ℥j. *Frankincense*, *Myrrh*, A. ℥ij. *Verdigrise* ℥ss. *Sal Armonack* ℥j. *Hoggs-Lard*, *Oyl Olive*, A. q. s. make an *Oyntment*. But this he saith is of greater *Vertue*: Take white *Vitriol* ℥iiij. *Alum*, *Verdigrise* A. ℥ss. strong *Vinegar* ℥vj. cal-

calceine in a luted Vessel, and powder it, which mix with Unguentum Egyptiacum, and arm the Tent with it. *Sennertus Lib. 5. Part. 2. Sect. 10.* has this. Take sharp Wine Vinegar, p. iij. Old Oyl, p. ij. Licharge p. j. grind the Licharge in a Mortar with the Vinegar, then boyl all together to the color and thickness of Pitch. The Green water, formerly mentioned, is exceeding good: So also Unguentum Fuscum Wurtz is most excellent in this case, if it be reduced by boyling into a Consistency, hard enough to make into the form of a Tent per se, and so put into the Fistula. § 9. If the Fistula be in the Fundament, this suppository is of great use: Take Agrimony M. ss. Scordium R. j. flowers of Hypericon P. ij. French Barly ℥j. boyl in white Wine and strain; then adding Virgin Honey ℥iij. boyl to a thickness; with which mix Olibanum, Mastick A. ℥ij. red Myrrh ℥jss. white Vitriol ℥j. Sarcocol ℥iij. of this mass, form Suppositories: but hereof more in another place. § 10. Fourthly, you may wash and cleanse the Fistula with Lotions, more especially those into whose bottoms you cannot easily convey other Medicines. Take Plantane and Rose Water A. ℥ij. in which dissolve white Vitriol ℥ss. Unguentum Egyptiacum ℥j. Syrup of dried Roses, ℥v. mix them. Or this: Take Plantane Water ℥ij. white Vitriol ℥ij. Calcined; fine Role ℥j. Camphir dissolved in S. V. rectified ℥vj. mix them. Instead of Plantane Water, you may if you please, use Lime water which is the better: moreover

S. V. or Aqua Vita, if mixed with other convenient Lotions, is a most excellent thing, as we have formerly prænoted: These things you may inject in with a Syringe. If you use cleansing powders, you may blow them in with a Pipe. Some use Lime water, in which Mercurius Dulcis Subl. has been dissolved, or wherein Turbith Mineral has been boyled. § 11. Fifthly, where the pain is great, apply Oyl of Roses, mixt with whites of Eggs, to ease it; and round the adjacent parts, this corroborating Emplaster; R Mastick, Olibanum, Pomgranate Peels, A. ℥ij. dust of a rotten Oaken post searsed. ℥iij. red Roses, Myrtle Berries, A. ℥j. yellow Wax, Rosin of the Pine, Oyl of Hypericon, A. ℥j. mix and make an Emplaster. § 12. But if notwithstanding all that has been said, the Fistula gives place to no Remedies that have or can be administered, we must betake ourselves to the Incision Knife, and fire it self. The whole Sinus is to be opened, (unless it be in those Fistula's that reach unto the great Arteries, Nerves, Tendons, Membrane, that girds in the Ribs, or other parts of like nature) First, search it by the Probe, or by some Liquor cast into it, then open it with the Incision knife, or according to the Position and form of the Ulcers with the Syringotomos. Secondly, the Fistula being laid open, remove the callous either by Medicaments, or with the Edge of a Penknife or Razor, cutting so far till you come to the good and sound Flesh, which you may perceive

ceive not only by the color, but by the Blood and sence of pain. § 13. *If the Callous be extraordinary hard, it will be the best way, to remove it with a red hot Iron, which is not only done with most speed, but also with least pain or Sense of Feeling, yet this remedy by reason of the terror thereof few people will admit of. In the interim, while these things are a doing, (whether by Caustick Medicaments, red hot Iron, or by the fire it self,) let the part be all the while well guarded with some cooling defensative and repeller, least the great pain should cause an Inflammation. The Fistula being thus throughly burnt, you must apply things to bring off the Eschar or Crust.* § 14. *If the Fistula ends in a Bone, so soon as it is discovered by Section, you must diligently scrape and pare away whatever is corrupted and black in the Bone, which must be but only in the superficies of the Bone: if the rottenness has corrupted the said bone farther, than the Scaly part is to be cut forth with a Wimple, unless it comes forth of its own accord: if the rottenness has penetrated to the Marrow, then that which is corrupted is to be taken forth, with a pair of Scissars for that purpose: if the Bone be wholly putrefied, it must be all of it taken forth, which may be well done in small bones, but not so in others.* § 15. *The bone being now cleansed, you are immediately to apply incarnatives, and then heal it after the manner of a simple Ulcer. if the Fistula does not give place*

to healing, it is a certain sign that all which was corrupted is not taken away, whereupon the Fistula is to be opened deeper, and the bone to be farther scraped and cleansed, with all the care imaginable. If it heals not yet, you may conclude that its depth is not to be found out, that it is desperate or incurable, and therefore the whole business thereof ought to be committed to nature. Yet Nicholas the Florentine, prescribes this Powder. *Rx Salt decrepitated, Tartar, Agarick, A. q. s. make them into a fine powder, which mix with Honey, and apply: this draws forth the Bones which are broken and corrupted, eats through the putrified Flesh, and heals the Ulcer; after the use of this powder, apply deterfive and sarcoctick Medicaments, for which purpose, Pimpernel, Golden Rod, Centory the less, roots of Aristolochy round, and such like are to be used.* § 16. *When after all, it appears that no real Cure can be expected, you must apply your self to the Palliative Cure, which drys and shuts it up (for a time) with a thin skin, which so remains till humors or Pus opens it again. First, let the Body be well purged, with proper Catharticks and Emeticks, and then a proper diet instituted, such as this: R Sena, Saffras rasped, A. ℥viij. Juniper Berries ℥xij. Guaiacum rasped ℥xvi. round Birthwort roots ℥iiij. Aniseed, Coriander seed, Ginger, all bruised, A. ℥ij. new Ale, twenty quarts, put the Ingredients into a large bag, and very loose (the Ju*

Juniper Berries being well beaten) with a stone in the bag to make it sink: let them work together for 2 or 3 days, then mix with the whole Dyet Cremor Tartari ℥iij. Volatile Sal Armoniac ℥j. Ens Veneris ℥ss. after which let the sick drink thereof, about half a pint, or something better, morning, noon and night, for several days together. Wash the Sore with Lime water, or with spirit of Wine, or with Lime water mixed with S.V. In these Liquors also let a new Sponge be thoroughly soaked, and applied to the Fistula, and fast bound to the place: some wash with this. R. Rose water ℥ij. S.V. ℥j. Roman Vitriol ℥jss. mix and dissolve, and dress every other day, unless the Pus flow plentifully; by this means the Fistula may be kept in a good condition, if not at length perfectly cured. § 17. Lastly, this is to be especially noted, that the Orifice of the Fistula may be open downwards, towards the inferior parts; that so the humors may more freely pass forth; or if it be not open, that then in that very place, it be opened, unless some very great and material cause forbids the same.

XIX. Of a Fistula Lachrymalis.

§ 1. This Disease is in the great corner of the Eye, neer the Nose, and proceeds from a Ulcer of the Caruncle, the Punctum Lachrymale growing callous. § 2. If it be newly begun, and has an External Orifice to be seen, it is Curable: if it continues a year there is a Caries and foulness of the bone, which is known by the

Cavity, and the stinking matter flowing from it; in this case it will scarcely be cured without burning. § 3. The Cure is done by first making a general Evacuation, either by purging, or vomiting or both. Then divert the defluxion from the head, by applying Cupping Glasses, Vescicatories and Causticks to their proper places, using a Decoction of Guaiacum and Sassa, for many days; and at the same time drying the Brain with solid Errhines by the Nostrils. R. Guttae Gambiae, Scammony, A. ℥ss. Confectio hamech q. s. mix and make an Errhine. Fabricius Hildanus, Cent. 1. Ob. 41. faith, That instead of a Caustery, he has applied a Seton to the Neck, by which means alone he has performed the Cure. § 3. Secondly, by removing the Callous: This is done by the rules in the former Section, for this purpose also the Flegm and Spirit of Vitriol, blew Vitriol, Verdigrise, burnt Alum, Mercury water, Aqua Fortis, Unguentum Aegyptiacum, are approved; but Unguentum Fuscum Wurzi, boiled to a consistency is the most absolute. § 4. The Orifice of the Ulcer ought to be opened and dilated with a Tent made of Elder pith, Sponge pressed, Gentian Root, &c. Riverius advises to wash the Ulcer every day with Rue water, applying after Unguentum Apostolorum, which is to be continued for three weeks, laying on some convenient Emplaster, and defending the Eye with Rose water. This cleanseth well: R. Rue water ℥iij. Honey ℥ij. Verdigrise ℥j. mix, after three days in.

inject it warm with a Syring. § 5. Thirdly, by incarnating or breeding Flesh, which you may do with this Unguent: *R* Flower-de-luce Roots, round Birthwort, Bark of Frankincense, A. ʒjss. Aloes, Cadmia Fossilis, Mastich, Myrrh, Sarcocol, A ʒj. Honey q. s. make it into an Oyntment: Or with the Collyrium, in Cap. 24 Sect. 21. § 6. Or with this Collyrium. *R* Frankincense, Aloes, Balauſtians, Sanguis Draconis, Alum, Antimony, A. ʒj Verdigrise gr. v. powder them fine, and with Rue water, make a Collyrium, which drop in with a stalk of Rue thrice a day, putting therein also a Tent wet in the same, and laying over it a plaster of Diapalma. § 6. If the bone be foul, the actual Cautey is for the most part used. First, find out the Cavity, every way, then mark it with Ink; after make Incision to the Os Lachrymale, or Zygomaculum; divide the Incision with your Nails, till you can put in a pretty pledget, then thrust in a Tent made of Unguentum Fuscum Wurtzj. &c over which lay Diapalma, malaxed with Oyl of Hypericon; then defend the Orbit of the Eye with Pledgets wet in Frogs-spawn water, with Camphir, and so bind it up; dress it twice a day, till the Callosity falls. § 7. Secondly, view the bone, and see how much is carious, to which apply this, or some such like. *R* Orrice root, round Birthwort, Hegg-Fennel, A. ʒss. Myrrh, Euphorbium, A. ʒj. make all into a powder, and in about 20 days, the Scale will fall. § 8. If the whole substance of the

bone be foul, pierce it with a Gimblet, so the matter flowing inward, the outward part will be healed. § 9. If it be malign, or seems to degenerate into Cancer (known by its hard and livid lips or edges, pricking pain, stinking and virulent matter,) apply only this. *R* Lapis Calaminaris, beat red hot and quenched in Vinegar, ʒj Myrrh, Lead burnt and washed, A. ʒss. Saffron gr. v. Opium gr. ij. Verdigrise gr. iiij. Hogs-Lard, q. s. grind all well together, upon a Marble. § 10. Fabricius Hildanus saith, Cen. 5. Obs. 22. that a Fistula Lachrymalis with foulness of the Bone, accounted desperate, being of 4 years standing; was cured with Medicines alone, dilating it with prepared Sponges, then sprinkling Euphorbium into it, and that very much and often, and after applying only a Plaster of Gum Elemi. These things being used diverse Weeks, he perceived the Scale of a Bone, which he drew forth: Lastly, with half a drop of Balsam of Tolu, upon a little Lint, once a day, put into the Ulcer, he perfectly healed the Malady, and that in a short time.

XX. Of a Fistula of the Brest.

§ 1. A Fistula in the Brest is more hard to Cure than in any other part, from the constant motion of the Muscles, more especially if it be oblique, and pierce into the Cavity: If there be joynd with it a Hectick or Marasmus, 'tis for the most part incurable. § 2. If the matter flows into the said Cavity, there will be shortness of breathing, and slower

motion of the Breast. § 3. The Cure is by the general precepts before going, if they perform it not, you may, according to Aquapendence, run a crooked Silver Pipe into the Fistula, so that its end may touch the bottom, through which pass a long Needle threaded with Silk; being drawn through, tie the ends of the thread together; this thread you dress with some corrosive water or Unguent, till the Callosity is removed, and then Cure it after the manner of a Simple Ulcer; during the whole cure, let the Patient drink plentifully of a good pectoral Diet. § 4. Amongst those remedies most powerful in this case are the Anisated Balsam of Sulphur, Spirit and Quintessence of Sassafras, and Fennel seed, Tinctures of Antimony and Coral, Volatile Sal Armoniack, Salt of Hartshorn, Spirit of Wine, Ens Veneris, &c. § 5. Sculterus, Tab. 39. Fig. 4. shews the incision of a Fistula of the Thorax, which was done suddenly, and almost in a moment with a Syringotomos, the point of which was wrapt about with a small Ball of Wax, that when it was thrust in, it might not rend the Flesh; then it is thrust into the Fistula, and when it comes to the bottom of it, it is forced through the skin and flesh above, with the right hand; so that the Ball of Wax remaining in the Ulcer, the point of the Knife may come forth by the hole made, which being laid hold on by the fingers of the left hand, the distance between both holes is cut asunder at one

stroke. § 6. The Syringotomos, is a crooked Knife, which upon the inside (a) hath an Edge, and on the other side (b) it is blunt, and at one end (c) it both pricks and cuts; this Instrument is chiefly used in all sorts of Fistula's, having but one passage, that the end or bottom of the Fistula, may be perforated, and then the space between each hole cut asunder (as aforesaid) the point thereof being first armed with a ball of white Wax, that it may go to the bottom without any hindrance, pain or hurt. See the Figure thereof, Tab. 7. O. P. § 7. An Observation of Sculterus of a Fistula in the Breast: It was on the right side, and left by the Chyrurgians of Heilbrun as desperate. Generals being premised, the narrow Orrifice was dilated with Pith of Elder strongly wreathed, till it would admit of the round Probe, wherewith he felt the bone rough. To consume the Callous, he put in a Style dipt in this Oyntment. *Rx Henbane seeds powdered ʒj. burnt Alum, burnt Vitriol, A. ʒss. Butter washed in Plantane Water q. s. mix and make an Oyntment.* The Callous being extirpated, he put a Tent into the Fistula, moistened on the top of it, with a Decoction, and then sprinkled over with Euphorbium powdered; the rest of it he covered with this Oyntment. *Rx Unguentum Beconice ʒj. Egyptiaci ʒss. mix them;* this hinders the breeding of any Callous substance: after two Months the Ribs threw off Scales, which being taken out, he diminished the Tent every day,

day, and dipt it only in Betony Oyntment, till the Ulcer was incarnated, after which it was cicatrised with *Ceratum Divinum*, the sick in the mean season taking a purging Wine. § 8. *Another Observation from the same Sculterus.* The *Fistula* was above, the left *Clavicle*, with a very small Orifice, which has dilated, (the Body being prepared and purged several times very well) with a Tent made of Gentian root prepared, *viz.* cut into the shape of a Tent dried upon a stove, and a thread fastned to one end of it. This was put into the hole, and kept in with a Plaster of *Diapalma*, with proper bandage, for 24 hours; then the Tent was drawn out with a pair of Pincers, swelled with a bilious matter, and black at the end, searching out the cause, the bone was rough and moveable. It was again tented with a bigger root, as aforesaid, (the parts about being defended against Inflammation:) And the third day with another bigger Tent, and so gradually increasing the bigness of the Tent, till the hole was big enough to take out the bone, which was almost separated: the sixth day the *Fistula* was filled up with Buttons made of Spunge, fastned to a thread, which did hang out of the Hole, over which was put a Plaster and breest plate Bandage. The seventh day, the sponges were taken out, and the *Fistula* being very open, the Bone was taken hold of with a pair of Forceps, and drawn forth with very little pain. The eighth day, the blood being stop-

ped, there was sprinkled upon the sound bone uncovered, this powder. *R. Roots of Orrice, of Birthwort, of Hogs fennel, A. 5ls. Euphorbium, gr. x. Myrrh ʒj. mix them.* This was applied with dry Lint, till the bone was covered over with firm Flesh. The Ulcer was daily cleansed by sprinkling refined Sugar upon it; which doth also mitigate Acrimony; and at last it was cicatrized with *Diapalma*. § 9. *The preparing of the Spunge Buttons.* Take a new Spunge never wetted, put to it an equal quantity of Wax and Rosin melted together, then press it out in a strong Press, and dry it in the shade, out of which cut round Buttons, and fasten them to a thread.

XXI. Of an Ulcer Gangrenated and Sphacelated.

§ 1. Sennertus affirms, that a Gangreen and Sphacelus are neither Tumors nor Ulcers; and that a Sphacelus is not so much as a Disease, but a very mortification and extirpation of the life of the part. A Gangreen is a notable and extraordinary distemper, tending to the aforesaid mortification, which may invade the party without any Tumor at all. Yet notwithstanding because it often follows upon Tumors, especially a *Phlegmon*, we have at large treated thereof in the Chapter of Tumors. *Lib. 1. Cap. 48. Sect. 15. Lib. 2. Cap. 35. Sect. 10. and Lib. 3. Cap. 24. Sect. 4.* in which places you may find out the several Causes, Signs, Prognosticks, and particular Method of Curing. Here we shall only deliver a few words con-

concerning an Ulcer Gangrenated or Sphacelated. § 2. *The Cause we conclude to be whatsoever destroys the native heat of the part, forasmuch as the life thereof depends solely thereupon.* Now the Native heat is destroyed. 1. By its contrary, in a manifest quality, as cold. 2. By extream outward heat. 3. Defect of Nutrimēt. 4. Suffocation, when the Transpiration is hindred by stopping the pores. 5. A poysonous quality, which is evident in a Carbuncle, as also in the biting and stinging of Venemous Beasts. The same is also done by *Septick Medicaments*, which (not wisely and carefully administered) have in them a power of corrupting the Flesh, chiefly in places hot and moist, as in the Emunctories, the privy parts, and other like places. § 3. *All Gangreens are dangerous, and the more dangerous if they be in moist parts, because that the innate heat is sooner suffocated in such parts, from the great store of humidity.* But a *Sphacelus* is far more dangerous, for the part that is taken with a *Sphacelus*, can no way be restored and made sound again, but must be forthwith cut off, to save the life of the Patient: for otherwise, the putridness will at length creep into the rest of the Body, and never cease increasing till it has contaminated the whole fountain of Vitality, before which there usually preceeds Dotings, Watchings, Swooning, Convulsions, Hiccoughs, Belchings, Sobblings, and a cold Sweat over all the Body: some

dye while they are yet speaking; and some dye as it were oppressed with Sleep. § 4. *The Cure we have largely handled in the place aforesaid; yet these things following, in an Ulcer gangrenated are farther to be observed.* First, if it proceeds from cold, let the over-cooled part be washt or plunged in very cold or almost frozen water, for so will the innate heat the more liberally diffuse it self, and expel the cold: giving inwardly Spirit or Quintessence of Rosemary in a glass of Canary; after a dose of our new London Treacle, then put them to bed to Sweat, applying also Stone Bottles full of hot water to the Sides: and warm Bricks wrapped up in a Napkin to the Soles of the Feet. If the Gangreen proceeds, you must immediately scarify, and foment the part with Spirit or Q. E. of Amber. § 5. *Secondly, if it proceeds from suffocation of natural heat, let the Diet be slender and cooling, and exhibit often Volatile Sal Armoniack in a glass of good Canary, the part is also to be scarrified deep and emptied by Cupping Glasses, and then defensives to be applied to the part. to which add convenient purging, the Incision being made. the part is to be washt with Brine, or Lixivium of Salt of Tartar, boyled with Meal of Lupins or Aloes, adding after boyling a quarter part of Spirit of Wine, and a tenth part of Spirit of Sal Armoniack, when the part is washed lay on the Egyptiack Unguent, which here is reputed to be the best of all the rest*

rest, as being a most efficacious remedy for taking away putridness, and separating the dead flesh from the sound. If the putridness be more than ordinary, use this: *R Verd:grise* ℥iii. *Syrup of Wormwood and Scordium* ℔j. *Vinegar of Squils* ℥vj. *Alum, Sal Armoniack* A.℥ss. *Juices of Rue and Scordium*, A.℥ij. *boyl them to a good thickness: then add of the best Treacle and Mithridate*, A.℥ss. *Camphir* ℥j. *mix them.* Or this Water, which has been successfully used in a Gangreen of the Cods. *R Vitriol* ℥j. *Oake tops* M.j. *Frankincense* ℥ss. *Camphir* ℥ij. *Urine* ℔ijss. *boyl to the Consumption of $\frac{1}{3}$ then strain.* All these are to be applied Blood warth, and continued till the putridness be removed. If these things do not, you must proceed to Causticks as *Mercury præcipitate* and such like. The Crust in what way soever it is produced, must be taken away, as we have taught in the Cure of a Carbuncle, not waiting till nature doth the work, but the highest part of the Crust, is with the edge of a Penknife to be cut even to the Sound part, to make way for Medicines, lest waiting till it falls of its own accord, a new putridness under the Crust should be contracted. § 6. Thirdly, If it be from poyson or malignity, as you must take care to defend the Heart, and expel the Poyson, so must you institute a cure here, almost like to those in malignant Feavers, viz. Medicines made of Citrons, Sorrel, Wood Sorrel, Roses, Borrage, Scordium, Carduus Ben.

Swallow-wort, Angelica, Dittany of Crete, Mithridate, Venice Treacle, principally Volatile Salt of Vipers, Harts horn, Urine and of Sal Armoniack: by which procuring Sweat, the Poyson will be driven forth from the Noble Members, to the exterior parts: If the Poyson sticks outwardly you must use defensives, that the Poyson may not creep abroad: but if it be inward, they are by no means to be administered, but the matter is to be called forth by Scarrifications on the part affected, Cupping-Glasses, Leeches, &c. washing the part with Decoction of Wormwood, Rue, Dittany, Swallow-wort, Angelica, Scordium, which last is of Sovereign Vertue in all Gangreens. If it be from the Biting or Stinging of venomous Creatures, you must use things which strongly attract the Poyson, dry it up, and consume it, such are actual Cauteries, also Scarrification with Cupping, after which those Medicines are farther to be applied which resist putridness and prevent the Necrosis or Sphacelation, and do attract also the depraved matter, as Garlick, Onions, &c. roasted and mixed with Leven, and other strong drawers. Lastly, the Gangreen being in a fair way of Recovery, cleanse the Ulcer by things made of juve of Smalage and Honey of Roses, mixed if need be with S.V. Incarnate and heal. § 7. It is at last to be considered that the Cure of Gangreens, scarcely differ at all; the difference only lying in the removal of the Causes. § 8. But if there

there is an absolute Sphacelus, you are to consider whether the member be sphacelated in part or in whole. If the sphacelation be but in part (having applyed a defensive upon the sound part) make many straight and oblique Sections, Scarify the dead flesh that lyes neer the sound, and this do very deep, even to the very bone; then strew upon the Wound, burnt Alum, Vine Ashes, Pot Ashes, and unslackened Lime (avoiding Arsenick, which melts, corrupts and putrefies the flesh) the Crust which is over the part affected, is to be taken away with a Pen-knife, not waiting till it falls of its own accord. But that the dead part may be dried, and easily separated from the sound, Fallopius applies this Sparadrape. *R. Acacia, Aloes, Aloe wood, Alipra Moschata, Alum, Cumin, Gallia Moschata, Myrrh, Sanders, red, white, yellow, A. ʒj. make a powder, of which take one ounce, Ship-Pitch, Rosin of the Pine, Colophony, A. ʒij. Frankincense, Mastich, liquid Storax, A. ʒjss. Gum Arabic, Tragacanth, A. ʒls. let all be melted, in which dip a linnen cloth to make a Sparadrape: afterwards heal it after the manner of a simple Ulcer. But some use the Actual Cautey, burning the putrefied flesh, till pain is perceived in the part, and then the Eschar being removed, to heal it as a simple Ulcer. But Fallopius likes not the actual Cautey, if there be much flesh, because that the said burning will make a most abominable loathsome stink.*
§ 5. If the member be wholly Spha-

*celated, it must be wholly cut off, as we have taught in this Book. Cap. 17. Sect. 8. and 9. To what we have there said, we add these things following, for stopping the flux of blood. First, Pulvis ad Casum Zwelferi, See Our Pharm. Lib. 4. Cap. 21. Sect. 42. Secondly, A Powder from Sennertus. *R. Fine Flower ʒij. Dragons Blood, Frankincense, Aloes, A. ʒij. fine Bole, Terra Sigillata, Plaster of Paris, A. ʒj. water Frogs prepared ʒj. Filix of a Hare cut small, Sponge terrified, A. ʒij. make a powder; but with Sennertus his leave, the powder of dried Toads ʒj. is much beyond that of Frogs. Thirdly, an Unguent: *R. fine bole, Terra Sigillata, Sanguis Draconis, Mastich, Alabastrer calx, Oyl of Roses, Oyl of Myrtles, A. ʒj. whites of Eggs, N^o iij. Vinegar q. s. make an Unguent. Fourthly, an Emplaster. *R. Fine Bole, Terra Sigillata, Sanguis Draconis, fine Flower, A. ʒj. Pitch, q. s. make a Plaster. Fifthly, Crepus Lupi, the Mushroom called Puck-sift, or Mulli-puff. Cut it into great and small pieces, of a fingers thickness or thicker, some as big as an Egg, and of a fingers length shorter or longer of all sorts: lay these several pieces in a paper as hard as you can, and tie them close together, after bind them harder together with tape, so that that which was as big as an Egg, be in binding no bigger than ones little Finger: this being done, press them together with many weights, or with a press, where let them lye for some days or weeks, then take them forth, tie them up together, and keep them for use. Sixthly, Pulvis Stypticus****

Mindereri, which see in Our Doron, Lib. 2. Cap. 21. Sect. .
 Seventhly, This Our Specifick.
 R powder of Mans or Sheeps blood
 ℥iij. powder of dryed Toads, burnt
 Alum, A. ℥ij. ashes of an old Hat
 burnt, fine bole, A. ℥j. Terra sigil-
 lata, Sanguis Draconis A. ℥ss. make
 a powder.

XXII. Of an Ulcer of the Head.

§ 1. If they be foul, you must
 cleanse them by washing them
 with this mixture: R canary
 Wine ℥iiij. S.V. ℥ij. Honey ℥j.
 mix them. If the Ulcer is very
 foul, and runs much, you may
 dissolve in the aforesaid liquor,
 Aloes Succotrina ℥iij. § 2. Af-
 ter the Ulcer is washed, lay over
 it Emplastrum de Meliloto com-
 positum. § 3. Purge the Patient
 with this; R Pilula ex duobus ℥ij.
 Mercurius dulcis sublimatus ℥j.
 mix and make Pills for vj. Doses.
 § 4. When you see that the Ulcer
 is thoroughly cleansed, you may per-
 fect the Cure with Arcæus his
 Liniment, dressing it once a day.
 § 5. If the Ulcer proves rebellious,
 and will not easily heal, apply a
 Fontinel or Seton to the nape
 of the neck, for by this means it
 is cured in a short time, and sel-
 dom returns again.

XXIII. Of an Ulcer of the Eyes.

§ 1. They are easy to be seen, but
 hard and dangerous in the Cure, es-
 pecially those in the Cornea and
 Pupilla, where for the most part
 they leave blindnets. § 2. If the
 Cornea is wholly corroded, the A-
 queous humor is let forth, and al-
 so often times the Crystalline.
 § 3. If there be an Inflammation

withal, it is generally very painful,
 and ought forthwith to be remo-
 ved, by those things præscribed
 in an Ophthalmy. § 4. To the Ul-
 cer it self, apply first abstersives,
 then such things as cicatrize. § 5.
 Abstersives or Cleansers. First,
 R White Amber, red Myrrh, A.
 gr. x. Saffron gr. vj. white Vi-
 triol gr. iij. Sugar Candy ℥j. whites
 of Eggs N° j. Eye-bright water
 ℥ij ss. mix them. Secondly, R
 Aloes, Frankincense, Tutty prepared,
 A. ℥ss. Vitrum δ gr. vj. white
 Vitriol gr. iij. Gum Tragacanth ℥j.
 Celandine water ℥iij mix them.
 Thirdly. R Myrrh, Aloes, red
 Coral prepared, A. ℥ss. white Tro-
 ches of Rhasis, Burnt Lead, A. ℥j.
 Crude δ ℥ss. Saffron gr. vj. Ho-
 ney of Roses q. s. make an Oynt-
 ment. § 6. A Collyrium to ci-
 catrize the Ulcer with. R Sacha-
 rum Saturni, burnt Lead, Sief Al-
 bum, A. ℥ss. Rose water ℥iiij.
 mix them, Wood Lice bruised
 and infused in Rhenish wine
 N°. CC. to a quart, and the Li-
 quor drink every morning fast-
 ing to ℥iij. is excellent to heal
 Ulcers, help dimness of sight,
 and cure most diseases of the
 Eyes.

XXIV. Of an Ulcer of the Nose.

§ 1. Ozæna, an Ulcer of the
 Nose is so called from the ill scent
 thereof: if it be recent and sim-
 ple, there is little or no pain and
 if when toucht it bleeds, and has
 a black dry crust upon it, it will
 be easily cured: but an old Ul-
 cer of the Nose is most properly
 called Ozæna. § 2. It sometimes
 spreads it self within the Nose to
 the Pallat, and then there is a
 great

great pain and a sordid Crust, more especially if it proceeds from the *French Pox*: if it be inveterate, it is hard to cure; if it degenerates into Cancer, it is incurable: if it proceeds from some præcedent Disease, that Disease (whatever it be) must be first removed, before *Ozæna* can be cured. § 3. *The Cause is a sharp, salt, bilious humor, which sometimes corrupts the Bone it self, but chiefly the Cartilage or Gristle, whereby the Nose is made flat, and the Face deformed.*

§ 4. *The Cure respects the whole body, chiefly the head, both which require general and particular evacuations, Corroborating and Moderate drying, Cupping with Scarrification, Setons, Vescicatories.*

§ 5. *First remove the Scab with Oleum Amygdalarum mixt with a quarter part of Sperma Ceti, then cleanse with juyce of Endive, mixt with Honey of Roses: if that be not strong enough use this: R Rhemish Wine ℥vj. Juyce of Pomegranates ℥ij. White Sugar ℥j. Litharge ℥ij. red Lead ℥j. & dulcis ℥ss. burnt Alum ℥j. boyl a little and strain. Or this, R Unguentum Fuscum Wurtz ℥ij. Burnt Lead, Ceruse, Tutia prepared, Litharge, Frankincense bark, Myrrh, round Birthwort, & dulcis A ℥j ss. Album Camphoratum, q. s. mix for a Liniment.*

§ 6. *If none of the former things prevail, you must use this. R Poteſtar. Mercurij noſt. ℥j. Plantane water or Canary Wine ℥j. mix: with which wash, this cleanses and dries without biting, and oftentimes performs all the Intentions of Healing: what our Poreſtars*

Mercurij be, see in our *Doron lib.* 1. now in the *Prefs*: it is a Medicine beyond Comparison. § 7. *Lastly, Heal and Consumate the Cure with Unguentum Mirabile, which see in our Doron, lib. 3. cap. 4. sect.* These two last Medicines are admirable, although the Ulcer be malign, or should proceed from the Venereal Disease: with the latter you may put Tents up the Nose dipt therein.

XXV. Of an Ulcer of the Mouth and Lips.

§ 1. *You must often purge and cleanse the Body, and if the Ulcer proceeds from any malignity, or antivenereal Cause, or from Mercury, you must use Sudorific and antivenereal Medicaments.* § 2. *Chaps in the Lips, and Critical breakings out after Feavers are cured with Ung. album, or with this: R Triad Beef or Sheeps Suet ℥ij. Hogs Lard ℥v. Sal Prunella in fine powder ℥j. mix and perfume with Oyl of Rhodium ℥ij. Or this: R Veal Suet from the Kidneys, wash it in fair water for 10 or 12 days, every day changing the Water ℥viij. White Virgin Wax ℥ij. melt them gently together, which perfume with Oyl of Rhodium and keep for use. It heals wonderfully, and if constantly used every night, preserves the skin as plump, full, smooth and fair (free from all Wrinkles or other Deformities) to extreame Old Age, as if the party was not full twenty. In washing of the Veal Suet, you must labour it and beat it extreame 2 or 3 times a day, till it is exceeding white, even as Snow it self*

self. § 3. But if the Ulcer of the Lips be inveterate, you must wash it with the Mixture at Sect.

XXIV. § 6. And anoint with the Ung. Mirabile specified at § 7. aforegoing.

§ 4. The Ulcer of the Mouth (which the Common people call the Cankers) is to be cured by Abstersives and dryers, for which purpose Barbet commends this. R Oak leaves M. j.

Roses, Balauſtians, A. P. j. Pomegranate peels ʒij. burnt Alum ʒij. White Vitriol ʒss. red Wine q. s.

boyl and strain to half a pint of the Liquor add Honey of Roses, Rob di-
amaron, A. ʒj. mix for a Gargarism.

Or this. R Common Chalk, Talk burnt, M. niij. burnt Alum, A. ʒj. fine Bole ʒij. & dulcis ʒss. Vitriol ʒj.

White wine q. s. boyl, and to ʒij. of the Liquor add of Ferneli-
us his Syrup of Comfry ʒiij. mix

them. Or this: R Scurvy grass, M. iij. bruise gently, and boyl in Rhenish wine ʒij. sweeten with

Syrup of Mulberries: wash the Ulcers with the Water, and keep the Herb night and day in the mouth against the place af-
fected.

§ 5. If all the aforesaid things do no good, you must touch the Ulcers with Oyl of Vitriol, till they are overcome; then

cleanse and heal with this Garga-
rism. R Plantane water ʒij. White Vitriol ʒj. Saccharum Sc-
turni ʒij. white Sugar or Honey ʒiv.

mix for a Lotion.

XXVI. Of an Ulcer of the Ear.

§ 1. It is known by Blood and matter flowing out, and may be caused either externally by blows, falls, or things gotten in-
to the Ears; Or Internally from

sharp, corrosive and malign hu-
mors.

§ 2. In order to the Cure, the Cause is first to be removed; if any thing be gotten in, it is to be taken out; if humors flow to the

part, you must use revulsion by proper purgings, Vesicatories or Seton, &c.

§ 3. The next thing to be done, is to cleanse the part with Abstersives, as R Hydromel ʒij.

Honey of Roses ʒiv. mix and in-
ject it with a Syringe very

warm; then dry it with the probe armed with Lint.

§ 4 The Ulcer being cleansed, you must con-
solidate and heal with this.

R Scurvy grass, M. j. round Birth-
wort ʒj. Canary ʒij. ss. boyl them,

strain and add thereto S. V. ʒij. in-
ject this warm into the Ear,

after apply this Liniment: R Ung. Diapompholigos ʒj. Dis-
tilled Balsam of Myrrh ʒj.

Honey of Roses ʒij. mix, and apply it with
Lint.

§ 5. If it be malign or In-
veterate, you must use a Diet of

Guajacum and Sarsa; solid
Errhines by the Nostrils, and

Masticatories by the mouth, then
cleanse with this. Take

Rhenish Wine ʒij. Honey of Roses ʒiij.

Vinegar ʒj. Verdigrise ʒj. burnt Alum ʒss. boyl, strain and
inject warm to cleanse, then heal

the Ulcer by § 4. just aforego-
ing.

XXVII. Of an Ulcer of the Back.

§ 1. If it has been of long stand-
ing, it is hard to Cure: If the

Vertebra be foul, or there be an
Atrophia, 'tis very desperate if

not incurable: those in the up-
per parts are more easily cured

than those in the Loyns. § 2. It
is generally caused from sharp hu-
mors,

mors, after either an Acute or a Chronick Disease; and often proceeds from Strumæ or some Tumor not well cured in a superior part. § 3. The Cure is to be considered according to the Cause, and Symptoms present, first, you must order a good Diet of Volatile Salts; and often evacuate gently both by Vomit and Stool: for the first of these we commend Volatile Sal Armoniack to be dissolved in Rhenish Wine, or Decoction of Guaiacum ʒj. to a Gailon of Liquor: but if an Atrophia be present, you must use Decoction of Sarsa, or Cock Broth in stead; for a Cathartick, Wine in which Sena is infused, or wherein the Species Hiera picra have been digested, is excellent. § 4. For Topicks, if there be any dead flesh, take it away with the Incision Knife, Scissars, or with a proper Canstick; then cleanse with such things as we have formerly advised: Or with this: Take Juicye of Smallege, Honey, A. ʒij. Juicyes of Endive, Hop leaves, Elder, A. ʒij. Turpentine ʒj. boyl to the thickness of an Oyntment. § 5. Lastly, the Ulcer being cleansed, Incarnate, apply over it Empl. de Meliloto, or that of Arcæus, and heal it according to Art: Vng. Nicotiana is very good.

XXVIII. Of an Ulcer of the Throat.

§ 1. These are commonly very painful, and often vitiated with a running water or matter. § 2. You must purge often with the Tinctura Catholica Grulingij, or with Tincture of Sena, and use a drying

and Vulnerary Diet. § 3. Outwardly you must use drying Medicines, and avoid all greasy Bodies as much as may be: pour warm into the Ulcer Unguentum Fuscum Wurtzij, then lay upon it Lint dipt in the same, over which lay Emplastrum Paracelsi: § 4. When the Ulcer is clean, and the flux of humors stayed, you must use incarnatives of the dryer sort, Take Vng. Diapomphol. g.s, desiccativum rubrum, A. mix and apply it. Or this, which also eases pain. Take Vng. Populæneum, album Camphoratum; Oyls of Quinces and Poppies, A. ʒj. mix for a Lintmen. § 5. If there be any Tumor near, foment with the Tincture of Pomegranate peels, Sumach and Mirtle berries in Spirit of Wine. § 6. If the Ulcer be very deep so that the Vng. Fuscum cannot come to the bottom of it, make Tents of the body of the Oyntment, being boyled to a thickness, which put into the bottom of the Ulcer, cover it that it may not get out again, over which lay Sticticum Paracelsi, as aforesaid: The Tent will melt in the Ulcer, cleanse powerfully, and repels any water or humor flowing into it: being cleansed, you may perfect the Cure with Balsam of Peru, and the Plaster aforesaid.

XXIX. Of an Ulcer in the Bladder or its Neck.

§ 1. An Ulcer of the Bladder, or its Neck is a very difficult thing to Cure, and for the most part incurable, but that of the Neck of the Bladder is cured the more easily of the two. § 2. This Dis-

ease has its beginning for the most part from a Wound, the Stone, a sharp humour, or Diuretick Medicines given by an unskilful hand. § 3. Inwardly, you must give things smooth, slippery, oleaginous and healing, such are Milk, Cream, Almond milk, Mucilage of Fœnugreek seed, Milk mixed with Plantane or Rose water, Emulsions of the four greater cold Seeds made with Poppy water, of which the Patient must continually drink, abstaining all the while from all things Salt, Acid, or any wise sharp. § 4. As a Specificke we commend Balsamum Verum made with Sugar into a bolus, or Balsam of Peru or Tolu: Or their Tinctures drawn with rectified S.V. and given ʒij. or jv. at a time in warm milk. Paracelsus commends Præcipitatus cum Aqua Ovorum, given a gr. iij. ad viij. and saith, That it facilitates the Cure of Fistula's, and Ulcers in the Neck of the Bladder, even such as are accounted incurable, if injected into the Bladder with a proper Vehicle. § 5. If the pain be violent, you must mingle with your Medicine (whether it be given by the mouth, or cast in by injection) a proportionable quantity of Opium, corrected by 3 or 4 years digestion in rectified S.V. no man can tell the excellency of Opium so prepared; for after a very long time, it becomes as it were another thing; it not only is altered from its pernicious qualities, wherein it did formerly very much abound, but its sanitive property is very much augmented and exalted. § 6. Barbet commends

this as a thing often experimented. Take roots of round Birthwort, Comfrey, Osmund Royal, A. ʒss. Myrrh, Mastic, Frankincense, Storax, Tragacanth, white Poppy seeds, Henbane seeds, A. ʒj. Spanish juyce of Liquorice ʒss. Venice Turpentine q.s. make a Mass of Pills, which form into the big-nels of a Pea. Or this, Take Troches of Winter Cherries, of Amber, burnt Talck, A. ʒss. fine Bole, Terra Sigillata, Mans skull, A. ʒj. Venice Turpentine q.s. make a Mass of Pills, which form into the big-nels aforesaid: of either of these Compositions let the Sick take 6 every Morning and Evening. § 7. Outwardly for an Injection you may use this. Take Lime water (but take heed it be not too strong) ʒiij. Plantane or Poppy water ʒij. white Troches of Rhasis ʒj. mix them: but for this purpose there can be no better thing in the World than our Aqua Ophthalmica, especially if to every six or seven Ounces thereof, you put of S.V. ʒj.

XXX. Of an Ulcer of the Womb and its Neck.

§ 1. These though slight are of difficult Cure, and therefore you must purge often, and prescribe a Vulnerary Diet for several weeks; if they proceed from a Venereal Cause, you may use the Common Diet, in that Case provided; for these Ulcers if they be carelessly handled, many times produce grievous Symptoms, and sometimes a Gangreen. § 2. For Topicks we commend to you Our Aqua Ophthalmica as a most admirable thing, more especially if mixt with S.V. or

or a little *Aqua Vite*. § 3. Barbet commends this following Liniment, and I can assure you upon my own knowledge, not without great reason. Take Orrice Root, Litharge of Gold, flowers of Sulphur, A. ʒij. Mastich ʒj. Mercurius dulcis ʒiv. Ung. Fuscum Wurtz ʒij. Honey of Roses q. s. mix and make a Liniment. § 4. This fume is also of singular good use. Take Gum of Juniper, Benjamin, A. ʒvj. Mastich, Myrrh, Labdanum, A. ʒij. make them into a powder: But if the Original was from the French Pox, you may add to the former powder Cinnabar ʒj. and use it twice a day.

XXXI. Of an Ulcer of the Yard.

§ 1. It may either be in the External part as the Glans, Præputium, &c. or in the Internal part as the Urethra: but the Cure for both is the same. § 2. Inwardly purge with our Hologoge Pills, or with Extractum Rudij mixed with Mercurius dulcis, or with the Cathartick Tincture of Clofseus, which repeat twice a week. § 3. Then exhibit a vulnerary Diet, or a Diet of Guaiacum and Sassa, if it proceeds from the French Pox, which continue at least 30 days, for as much as these kind of Ulcers are stubborn and rebellious, and often time return again, or otherwise are apt to degenerate into Cancer or to Sphacelate. § 4. Outwardly wash with our Aqua Ophthalmica as aforesaid, and if the Ulcer be in the Urethra, inject it in with a Syringe: you may also anoint with Unguentum Mirabile,

or with this. R Litharge ʒls. burnt Lead ʒij. Turra prepared ʒij. Aloes ʒiss. Pomgranate peels dried ʒj. Load stone, Saccharum Saturni, A. ʒij. Oyl of Roses, Quicksilver, A. ʒij. Wax q. s. make an Oyntment. § 5. If this prevails not, by reason of the foulness of the Ulcer, you may use this. R burnt Alum ʒj. Verdigrise ʒss. Plantane water ʒiiij. Rhenish Wine ʒvj. S. V. ʒj. mix them and boyl a little, to which if the occasion yet require it, you may add a little præcipitate or ʒ dulcis. § 6. If there be Caruncles or Carnosities in the passage, you may put up a little Suppository made of equal parts of Ung. Fuscum Wurtz ʒij and Honey of Roses, boyled up to a fit thickness. Or this: R Litharge ʒij. Minimum ʒj. flowers of Sulphur ʒij. Ung. Egyptiacum ʒj. Honey of Roses q. s. mix them, and herewith anoint a Wax Candle, which put up the Urethra, repeating it twice or thrice a day, till there is a perfect cleansing. § 7. Washing in Lime water (not too strong) is excellent, so also with our Aqua Ophthalmica, they being injected with a Syringe: Lastly, you may heal with Unguentum Mirabile. Inwardly take a Traumatick, Sudorifick and Antivenereal Diet. § 8. But if it cannot be cured by any of the former means, or if it grows so great as to stop the water, you must come to manual Operation, but that no other parts but only the Caruncle may be eaten away, and that the Urine might not wash away the Medicines that are applyed, you must (by the advice of Fabricius

ab Aquapendence) make a Pipe of Linnen, and smear it over with white Wax: let it be in length about an Inch or an Inch and half, and so broad as to be equal to the Silver Catheter, and at the end thereof let a long Thread hang: this Linnen pipe let be smeared over with this Liniment, *R Honey Calcined to Ashes, Tutty prepared, fresh Butter, Turpentine washed, Wax, A. ʒi. burnt Alum ʒi. melt and mix*, this consumes the Caruncle without pain, or excoriation of the sound part. But some highly commend the following of *Richus Cervierus*. *R Sulphur vive, & præcipitate, Verdigrise, Crude Antimony, all in powder, A. ʒiij. white Wax ʒj. which mix well in a Leaden Mortar with Oyl of Roses q. s. to an Oyntment.* The Linnen Pipe being anointed with one of these, must upon the Catheter be thrust into the Urethra till it meet with the Caruncle, then the Catheter is to be drawn back, and the Linnen pipe left in the passage to be afterwards drawn forth by its fastned Thread. § 9. If the Ulcer be cancerated you may use this, which has been experienced to Cure. *R Juyce of Bramble tops, or of the fruit, Vinegar of Roses, A. ʒij. Juyce of Housleek ʒiij. Aqua Vita ʒiv. Mallaga Wine, Oyl of Roses, A. ʒvj. Litharge of Gold ʒj. Mastich, Frankincense, A. ʒi. Verdigrise ʒij. Vriol, burnt Alum, A. ʒi. Camphir ʒj. powder what are to be poudred, &c. boyling all together (except the Camphir) with a gentle fire to the Consumption of the Juyces; then*

put in the Camphir, and adding Wax q. s. make an Oyntment. § 10. If a *Sphacelus* attends the part, the only Cure is by cutting off, lest it creep inward and perforate either the Bladder or Perineum, and so kill the Patient.

XXXII. Of an Ulcer of the Hands or Arms.

§ 1. These often proceed from Contusions, Tumors, Kings Evil, &c. or being simple Ulcers often degenerate into the latter. § 2. Convenient purging and often, is to be done with Tincture of Sena, or Rosin of Fallap mixed with a third or half part of *Mercurius dulcis*, giving the Patient in the mean season a good Traumatick Diet. § 3. For Topicks; if there be pain, you must apply Anodynes; and in cleansing you must be cautious that you use not too strong Abstersives, by reason of the many Tendons, Nerves, &c. The juyce of Smalage is good, and most excellent is Ung. Euscum Wurtzj, or Ung. Nicotiana, which are also good if it be from Struma, so also Ung. Bryonia. § 4. If there be any great Tumor withal, apply this Cataplasim. *R Bean meal ʒij. fine Bole, Dragons blood, A. ʒij. Saffron ʒss. Plantane Water, Wine Vinegar, A. ʒij. boyl; and at the end, add Oleum Rosarum ʒiv. and the Yolk of one Egg.* § 5. If there is proud flesh, you may take it away with burnt Alum, or with this. *R burnt Alum ʒij. the sharpest Vinegar ʒiij. boyl to dryness, and then Calcine it again.* Burnt Alum also dissolved in Wine, wonderfully dryes all sorts of Ulcers.

XXXIII. Of

XXXIII. Of an Ulcer of the Thighs, Legs or Feet.

§ 1. These are difficult to Cure if they have been of long standing, and so much the more because they are depending parts, for as much as the humors of the Body more easily flow to those parts than to others. § 2: In Order to the Cure, such internal Medicaments of general Tendency are to be exhibited here, as we have formerly prescribed in Ulcers simple, sordid, carious and fistulous, both as to make proper evacuations and also for Diet. § 3. But in the Cure hereof this is not enough, except the Leg or Thigh be roused from the foot upwards, and the Body be purged well twice a Week, which is often to be iterated, lest the continuance of the Ulcer, consuming the Juices of the Body should produce a *Tubes*, which is often seen: and for change of

the Course of the Physick, which is also very necessary, Vomiting and Sweating ought to be alternately used, especially if the Body be robust and able to bear it. § 4. You may cleanse with Ung. Fuscum Wurtzij, or Ung. Nicotianæ, both which are excellent things; and the latter of them not only cleanses, but incarnates withal, not suffering any proud flesh or ill Symptom to follow. § 5. Over all you may lay the Liniment of Arcaeus, or thin plates of Lead, either alone or besmeared with Quick silver: Lastly, you may skin with Vng. Diapompholigos mixt with a little Burnt Alum, or which is better with Vng. Mirabile, which consummates the Cure to all Intentions: Take heed that the Ulcer does not Gangreen; probe not too deep, nor roul or bind it too hard.

CHAP. XXVII.

Of FRACTURES.

I. OF the Cure of Fractures in general.

§ 1. Have in a readiness every necessary, as a Plaster of Diacalciteas, (something broader than will cover the Fracture, and long enough to encompass the Member; two Cloths thrice double of the same length; three or four splints clothed with Tow; a large cloth to put over them; four or five pieces of broad Tape to bind

with; a Junk of Straw to lay the Member in; and lastly Bolsters of Cloth and Tow, to put in the hollow places, that the part may lye smooth and level. § 2. Then put the Sick into a fit posture to extend the Member, causing one to take the end thereof in both his hands, extending it not hastily but by degrees, whilst others hold the Sick that he moves not, then let the Artist grasp the

Fra-

Fracture with both his hands, that as the other extends the Member, he with his Fingers may reduce all the broken bones to their just places. See cap. 14. sect. 3. 4. 5. 6. 7. 8. 9. where we have treated hereof at large. § 3. *This done, lay on the Emplaster, (two men holding the part steady,) then the two folded cloths, the one a little above the Fracture, the other a little below, so that their edges may meet; then lay on the splints, the breadth of a splint distant one from another, which with the Tapes tie on, not too hard for fear of a Gangreen, nor too slack, lest the Bones fall asunder again, then cover all with a large Cloth, and lastly, put it into the Junck, binding it fast on, and putting the Bolsters in the hollow places, lay the Member on a Pillow, as straight and as level as may be.* § 4. *Thus let the Sick rest in his Bed for 7 or 8 days, unless pain or other causes, force you to open it; then open it, to refresh it, and bind it up again for 7 days more, at the end of which you may renew your Plaster, or apply Siccicum Paracelsi.* § 5. *With Lenitive Electuary, keep the Belly soluble; and now and then help him to raise up his Back to refresh it, lest it excoriate; and to remove his Hips, lest they or the Leg and Thigh should grow numbed or dead.* § 6. *If the Fracture be with a Wound, so order the Cloths and Splints that you may dress the Wound and not unbind the part; but be sure you apply no Unctious thing neer the Bone, but dress it with proper things, as we have*

taught cap. 25. sect. 1. 2. 3. 4. 5. aforegoing. § 7. *For the first six days give the Sick three or four times a day Syrup of Corals or Pearls, or Tincture of the same, or instead thereof Balsam of Sal Gem, or two spoonfulls of the juyce of Solomons Seal, in Rhenish Wine or rather in Canary, Tent or Alicant, every morning fasting.*

II. Of a simple or single Fracture.

§ 1. *This has one onely common or Universal Indication, viz. that what is thus disjoyned must again be united, wherein if the broken bones be fallen out of their places, they are to be reduced by 1. KATACTHOS or ANTHACTHOS to wit, Extention 2. DIAPTHOSIS, a conformation or replacing of the broken bones in their own proper place.* § 2. *How these things are to be done, we have already taught, in the place before-cited; but because this extention is not always made by the hands and main strength of the arms alone, but by certain Instruments or Engines; to wit. 1. The Pulley of Vitruvius, which he mentions Lib. 10. Cap. 4. 2. Hippocrates his Table. 3. His Glossocomon. 4. The Glossocomon of Galen. 5. The Reductive Ladder. We shall in this place give a Description of them all.* § 3. *The Description of the Pulley of Vitruvius. It is made like a Pulley, viz. D.D. within which there lyes three Wheels, through whose furrows or hollows, runs the rope, which is to be drawn, marked H. at the ends of this Pulley are fastned Hooks, the one of which is to fasten the Pulley*

by to a post, the other is to draw the Ligature fastned to the part: B. B. are the boxes or cales in which the Pulley is kept or inclosed: A. A. their covers or heads: C a screw-pin, made so that it may screw into a Post, having a hole somewhat less than the Screw, first bored by a Gimblet, whereby it may be let in, See the Figure. Tab. X. Fig. 1. and 2. § 4. *The Description of Hippocrates his Table.* The board A. is six Cubits long, and three foot in bredth. The thicknels \mathcal{A} . is 9 Fingers bredth, where it is to be turned upwards. This board has four other boards, which are round in the upper parts, viz. two and two at each end B. B. these Hippocrates calls *axilas*: in the bredth they are perforated, and through the holes the Axel-trees C. C. pass, which at the ends D. D. D. D. have handles to turn them about. The whole Plank from the middle to the end hath hollow places E. E. E. &c. that are four fingers bredth distant one from another, whose bredth and depth are equally 3 fingers bredth, in which a round peice of wood F is set, these holes Hippocrates calls *xamētes*. This Table has in the middle two other Posts, G. G. which contains the cross peice of Timber H. in the upper hole to reduce the Thigh, slipt forwards in the hinder and external part. The Table stands on six feet, that it may be lifted up with mens hands, and removed from place to place. To the little wheels of the Table *Remora's* may be fitted, to keep the Axel-trees

end unmovable. § 5. *The use of the Table, exemplified in the reduction of the Ankle-bone dislocated.* The Ankle-bone, whether dislocated inwardly or outwardly, is thus to be reduced: Lay the sick upon the Table on his back, the Legg offended being stretched forth: upon the Legg, (presently under the Knee) bind about a cord A. after the manner as it is bound on the Top Mast of a Ship, and extend equally, and bring the ends of it on the hinder part, to the Axel-tree, which is above the Head; but on the Ankle tye the knot or Sandal B., and bind the ends of it to the neither Axel-tree, and then either draw the part diverse ways, or hold it so, and extend from the lower part; and the strings being drawn as much as needs, force it back again conveniently, when it is started forth to the inward or outward part: but when it is gone to the hinder part, draw it out by force, which is then very convenient. But if in a Fracture of the shin bone, or minor fossile, or of both Bones at once, the leg cannot be extended with the hands, let the Patient be placed upon the Table, and let the Ligature A. be put about the leg, below the Knee, but let the Sandal B. be bound above the Ankle, then let the leg be extended, by the bands drawn diverse ways, and let the Fracture be set together § 6. *The Use of the Table in the extension of the Spina dorsi dislocated, towards the external part.* This you may do if the half post G. G. be removed with the *Prisipiscus* F. and into the

the hole of the right post A. some hollow peice of wood B. be let down, which may receive the *Spatha* C. to be made fast with the Pin at D. that it fall not out. This done, lay the Patient upon his Face on the Table, then let two Cords be put about his middle, one about E. the other below F; the bunch of the back, whose ends must be carried oppositely to the Axel-tree, that being turned about, they may equally extend the Back-bone. That piece of Timber which receives the *Spatha* or Cross bar, must have at least three square holes, that the Cross-bar, for the greatness of the bunch of the back, may be fitted to it. Lastly, the *Spatha*, being set upon the bunch of the back, must be pressed down with the greatest violence, that the dislocated bone may be forced in. See Tab. X. Fig. III. IV. V. § 7. *The Description of Hippocrates his Ἀνέλυ or Glossocomon*. It is designed to restore a Shoulder luxated into the Arm-pit: This Instrument called *Ambi*, has First an upright pillar of wood A. fastned upon a foot B. which foot is fastned with screw-pins C. C. that it stir not in the Operation: Secondly, a *Spatha* D. fastned with an Iron Pin E. into the upright pillar, which may be turned, lifted up, or pressed down at pleasure. To this *Spatha* is added three strings, FFF. for the binding of the Arm, that it may be kept steady. The *Spatha* D. must be 4 or 5 fingers broad, and two fingers thick, and about two foot and a half in length, or more: the end thereof G, must be round and

narrow in that part, but very high with Ears or stops to hold and keep in the top of the shoulder; and the upper part of the roundness must a little stick out, not to touch the side, but the top of the Arm. See Tab. XI. Fig. I. § 8. *The use of the Ambi*. Let the sick sit upon a seat, somewhat lower than the frame, that is the *Spatha*, which is thrust into the Arm-pit, may be more forcibly depressed, so to force in the head of the Shoulder-bone; the Arm must be bound to the *Spatha* at length with its strings, first just below the top of the shoulder; next above the elbow; and last upon the wrist. This done, fix the *Spatha* to the Pillar A. with the Iron Pin E. then the Artist, on the one side, shall pull the Arm downwards, whilst his Servant on the other side, taking hold of the neck and shoulders, shall likewise pull down the Patient. See the Tab. XI. Fig. II. § 9. *The Description of Galen his Glossocomon, for Fractures of the Thighs and Leggs*. It hath on the lower part the Axis A. to which must be tied the ends of the strings or Cords, which extend diverse ways; let the strings be fastned upon the uppermost part of the bone to be cured, and make them so of two bands B. and C. that both of them may have 4 ends, two on the right side F. and as many on the left side G. From those ends, those things which are belonging to the lower string B. must be drawn to the Axel-tree, by the holes made in the lower part of the

the *Glossocomon*, D; and those things which belong to the uppermost string, must first proceed to the upper parts, then they must also be put through the perforated sides of the Instrument (fitted with rundles or pulleys) whereby they are fastened to the holes of the screw F. but on both sides, one the outside of the *Glossocomon* F and G, the ends of the upper cord C. must be carried to the *Axis*. This done, one turning about of the *Axis*, both strings or cords will equally extend, that downwards which is bound to the lower part of the broken bone; the other upwards; so that where the legs lyeth, you may afterwards daily correct this stretching of the strings, by extending more or less forcibly. The *Axis* extends the string B. in the lower part, by a direct motion: but the string C. in the upper part *Διὰ τὴν μετὰ δυνάμιν τὰς αὐτῶν*, by a regressive motion. If the leg be the part affected, the string C. must be placed below the Knee, and the string B above the Ankle. See Tab. XI. Fig. III. § 10. *The reductive Ladder.* It is a Ladder, whose uppermost round has a round body upon it E. which is put under the Arm pit, between the side and the top of the shoulder; after this, the Artist draws downwards the Arm out of joynt, but not bound to the *Spatha*; another laying hold of his neck and top of his shoulder, draws likewise on the other side; a third laying hold of the whole Body, draws downwards also. It may have four pulleys

(if the Artist so please) F.F.F.F. imitating the *Glossocomon* of *Galen*. It may also serve for reducing the thigh bone out of joynt, as also the Hip, whether it slip forward or inward. The Ladder is fixed, (whether set in the ground or otherwise) where upon the Patient sits with the sound leg, rightly extended, and bound about it with the best convenience. But to the leg out of joynt G. there is hanged a heavy weight, or a Vessel full of water. See Tab. XI. Fig. IV. and V. § 11. *The member being by some of the former means extended, and rightly conformed, that it may remain so, it is necessary that it be well bound up, and well placed: but before the binding, you ought to apply somewhat to prevent the afflux of Humors, and Inflammation, as also to help forward the Callus.* *Hippocrates* useth a Rose *Cerote*. *Celsus*, cloths dipt in Oyl and Wine, or juyce of Pomgranates. Others use both of them. Some use hurds of Flax soaked in glair of Eggs; or *Pulvis Astringens*, mixt with whites of Eggs; Or a Catpalasm made of Glair, fine Bole, *Terra sigillata*, and Dragons Blood. Which said Medicines are in all the bindings to long to be continued, till there is no farther fear of Fluxion or Inflammation. Afterwards apply (if in Summer) *Empl. Diapalma*, or (if in Winter) *Empl. Barbarum*. § 12. *But if the sick is in great pain, apply the Cerate, and Oyl of Roses and Wine.* Or this, R. Dragons Blood, Linseed poundred, fresh Butter, Cornfry roots, *Osteocolla* stone prepared, A. ʒiij. fine Bole, Ceruse A.

the hole of the right post A. some hollow peice of wood B. be let down, which may receive the *Spatha* C. to be made fast with the Pin at D. that it fall not out. This done, lay the Patient upon his Face on the Table, then let two Cords be put about his middle, one about E. the other below F; the bunch of the back, whose ends must be carried oppositely to the Axel-tree, that being turned about, they may equally extend the Back-bone. That piece of Timber which receives the *Spatha* or Cross bar, must have at least three square holes, that the Cross-bar, for the greatness of the bunch of the back, may be fitted to it. Lastly, the *Spatha*, being set upon the bunch of the back, must be pressed down with the greatest violence, that the dislocated bone may be forced in. See Tab. X. Fig. III. IV. V. § 7. *The Description of Hippocrates his Ausculor Glossocomo*. It is designed to restore a Shoulder luxated into the Arm-pit: This Instrument called *Ambi*, has First an upright pillar of wood A. fastned upon a foot B. which foot is fastned with screw-pins C. C. that it stir not in the Operation: Secondly, a *Spatha* D. fastned with an Iron Pin E. into the upright pillar, which may be turned, lifted up, or pressed down at pleasure. To this *Spatha* is added three strings, FFF. for the binding of the Arm, that it may be kept steady. The *Spatha* D. must be 4 or 5 fingers broad, and two fingers thick, and about two foot and a half in length, or more: the end thereof G, must be round and

narrow in that part, but very high with Ears or stops to hold and keep in the top of the shoulder; and the upper part of the roundness must a little stick out, not to touch the side, but the top of the Arm. See Tab. XI. Fig. I. § 8. *The use of the Ambi*. Let the sick sit upon a seat, somewhat lower than the frame, that to the *Spatha*, which is thrust into the Arm-pit, may be more forcibly deprest, so to force in the head of the Shoulder-bone; the Arm must be bound to the *Spatha* at length with its strings, first just below the top of the shoulder; next above the elbow; and last upon the wrist. This done, fix the *Spatha* to the Pillar A. with the Iron Pin E. then the Artist, on the one side, shall pull the Arm downwards, whilst his Servant on the other side, taking hold of the neck and shoulders, shall likewise pull down the Patient. See the Tab. XI. Fig. II. § 9. *The Description of Galen his Glossicomon, for Fractures of the Thighs and Leggs*. It hath on the lower part the Axis A. to which must be tied the ends of the strings or Cords, which extend diverse ways: let the strings be fastned upon the uppermost part of the bone to be cured, and make them so of two bands B. and C. that both of them may have 4 ends, two on the right side F. and as many on the left side G. From those ends, those things which are belonging to the lower string B. must be drawn to the Axel-tree, by the holes made in the lower part of the

the *Glossocomon*, D; and those things which belong to the uppermost string, must first proceed to the upper parts, then they must also be put through the perforated sides of the Instrument (fitted with rundles or pulleys) whereby they are fastened to the holes of the screw F. but on both sides, one the outside of the *Glossocomon* F and G, the ends of the upper cord C. must be carried to the *Axis*. This done, one turning about of the *Axis*, both strings or cords will equally extend, that downwards which is bound to the lower part of the broken bone; the other upwards; so that where the legs lyeth, you may afterwards daily correct this stretching of the strings, by extending more or less forcibly. The *Axis* extends the string B. in the lower part, by a direct motion: but the string C. in the upper part *Διὰ τὴν ἀναδυστικὴν ταρσῶς*, by a regressive motion. If the leg be the part affected, the string C. must be placed below the Knee, and the string B above the Ankle. See Tab. XI. Fig. III. § 10. *The reductive Ladder.* It is a Ladder, whose uppermost round has a round body upon it E. which is put under the Armpit, between the side and the top of the shoulder; after this, the Artist draws downwards the Arm out of joynt, but not bound to the *Spatha*; another laying hold of his neck and top of his shoulder, draws likewise on the other side; a third laying hold of the whole Body, draws downwards also. It may have four pulleys

(if the Artist so please) F.F.F.F. imitating the *Glossocomon* of Galen. It may also serve for reducing the thigh bone out of joynt, as also the Hip, whether it slip forward or inward. The Ladder is fixed, (whether set in the ground or otherwise) whereupon the Patient sits with the sound leg, rightly extended, and bound about it with the best convenience. But to the leg out of joynt G. there is hanged a heavy weight, or a Vessel full of water. See Tab. XI. Fig. IV. and V. § 11. *The member being by some of the former means extended, and rightly conformed, that it may remain so, it is necessary that it be well bound up, and well placed: but before the binding, you ought to apply somewhat to prevent the afflux of Humors, and Inflammation, as also to help forward the Callus.* Hippocrates useth a Rose Cerote. Celsus, cloths dipt in Oyl and Wine, or juyce of Pomgranates. Others use both of them. Some use hurds of Flax soaked in glair of Eggs; or *Pulvis Astringens*, mixt with whites of Eggs; Or a Catpalasim made of Glair, fine Bole, *Terra sigillata*, and Dragons Blood. Which said Medicines are in all the bindings to long to be continued, till there is no farther fear of Fluxion or Inflammation. Afterwards apply (if in Summer) *Empl. Diapalma*, or (if in Winter) *Empl. Barbarum*. § 12. *But if the sick is in great pain, apply the Cerate, and Oyl of Roses and Wine; Or this, R. Dragons Blood, Linseed poudred, fresh Butter, Comfrey roots, Osteocolla stone prepared, A. ʒiij. fine Bole, Ceruse* A.

A. ʒj. whites of Eggs N°. xv. fine Flower, q. s. mix and make a Cataplasim, put it upon the Fracture, and after two days let it be removed, this repeat five times one after another, binding and placing the part, as we have formerly directed, till such time as the Callous is bred, and the Fracture healed, which in the Thigh is wont to be done in forty days, in the Shoulder and Ankles in thirty; in the Radius and Elbow in twenty; and in the Bones of the fingers in five daies: but however the time of healing much varies, according to the Age, Constitution and Nature of the Fracture it self; being cured much sooner in a young person than in one old, and sooner in the Spring, than in the Summer. § 13. But while these things are a doing, you must order a good Diet, and convenient purging, that all malignity may be corrected, all superfluous humors evacuated, and the Bones the sooner conglutinated, which though it is the work of Nature, yet the Physician ought to help and assist her, in her operation, which may be done by the former Medicaments, in the place whereof (after a few days) you are to apply *Emplastrum Diapalma, Barbarum, Oxycroceum, Nigrum*, and the like: ordering a good and nourishing Diet, and taking care to prevent the Symptoms, for at least ten days, forasmuch as (in many Fractures) there is scarcely ever any Callous generated under the twelfth day at least: but let the Diet be at first spare, afterwards the more plentiful. § 14. There are also

some Medicaments given inwardly, which cause the more speedy breeding of a Callous, which are chisly powder and juyce of Agrimony roots, and *Osteocolla* stone prepared, which may be often given to ʒj. in Comfrey water: But in such as are young, a full Diet and things breeding a Callous are not to be allowed, without much caution, for that this Callous will certainly grow too fast and too much; in aged people they are allowable. To the former add Decoctions of the roots of Comfrey, of Consound greater or lesser, of Dragonwort, of Primroses, of Cranesbill, leaves of Savin: as, R roots of Comfrey, Consound, Dragonwort, A. ʒj. Cranes bill M. j. Savin M. ss. Mace ʒss. Galangal, Zedoary, A. ʒij. boyl in Canary Wine q. s. strain, and let the sick drink thereof, morning, noon and night. Or this of Fabrisious, Cent. 3. Obs. 90. R Offisfrage stone prepared ʒj. Cinnamon ʒij. Sugar ʒij. make a fine powder. Dose ʒij. every morning in broth. Outwardly apply Our Plaster ad Herniam, made of an Ox Gall, to ʒij. of which add Oxycroceum ʒss. Osteocolla stone prepared ʒjss. Earthworms powdered ʒj. Oyl of Earthworms, q. s. make all into an Emplaster. § 15. When the Callous is bred and come to its just magnitude, you must confirm it by Medicaments which corroborate, of which this Cerate is inferior to none. R Oyl of Roses ʒij. Wax ʒiiiss. Resin ʒij. Mastic, Olibanum, A. ʒi. fine bole ʒss. Saffron ʒj. mix and make a Cerate which

which spread upon Linnen, and apply.

III. Of a Fracture with a Wound.

§ 1. All Fractures with Wounds are more dangerous than those without, and they are yet far more dangerous, if they happen to be within the Flesh, the flesh and skin lying over it, remaining still whole and sound. This danger is so much the greater, by how much the parts that are broken and shattered, are more noble and principal, as the Muscles Nerves, Veins and Arteries. From hence it is that a Fracture in the Thighs or Shoulders, with a Wound, and falling out of a Bone, is the most dangerous of all, as Hippocrates testifies, de Fract. Lib 3. Text 47. and his reason is, because there are other things of great moment wounded, viz. Nerves, Muscles and Veins. Moreover, a Fracture with a Wound made with a cutting weapon is very dangerous, and if the Incision be straight, will very hardly be brought to grow together again; for that by this cutting weapon, the pores of the bone, through which the Aliment for breeding of the Callous did formerly pass, are in a manner obstructed, whereby the Callous is the longer ere it be generated; which is also hindered from the smoothness or equality of the ends of the divided bones, by which the Coalition or growing together is much hindered. § 2. The Indications of Cure are twofold, viz. first, that the bones be again restored to their right places: se-

condly, that the wound may be healed. § 3. The replacing of the bones, is very difficult, because of the Wound, for that without great pain, and fear of a Convulsion, there can be no extention, yet a sufficient extention must be, but without any kind of violence, and that instantly, before any Inflammation doth arise: for if the part should be inflamed, neither extention nor putting back of the bones, could be done without apparent danger of life. § 4. The next thing to be considered, is the binding up, wherein you must note, that the first band must be broader than the Wound it self, especially at the beginning, from whence we begin to wind it about, that it may comprehend the lips of the Wound on both sides, for if the band be too narrow, then it would hold the Ulcer in, and cause pain. The bands also must be bound less close, than for a Fracture without a wound, lest the wound being pressed, pain and inflammation should arise, and for the same reason, let them also be more soft than for a simple Fracture: the number of Swaths may compensate the more loose and easy binding, since that it is far more safe, to roul about the Swaths oftner, than any ways to hurt the part by compression. § 5. On the third day, the binding is to be loosed; and then it is again to be ordered after the first manner, yet so that the ligature may compress it somewhat more, unless fear of pain or inflammation persuade other wise. Then may you very fitly make a hole through the Emplaster

plaster or Cataplasm imposed on the Fracture, and indeed in the very midst of the Swaths, there is a hole to be left, that so fitting Medicaments may be administered to the Wound, whereby it may be thoroughly cleansed and purged, without loosening of the Fracture. For although that for the first three or four days, there will flow but very little, either of Pus or Sanies, viz. thick or thin Excrements, yet nevertheless the generating of abundance of the said Pus, cannot be avoided; since that all whatsoever is bruised, must of necessity be converted into such like matter. § 6. Ferula's ought not to be laid to the Wound without great necessity; and then to be placed on the sides of the Wound, and the opposite parts, till such time as the Wound is cured, which in such a Fracture with a simple Wound is commonly at second or third dressing; at least, it is filled up with flesh. When the Wound is healed, if the bone be not yet strengthened, you must deal with it, as for a simple Fracture. For the speedy curing of the Wound (among many other things formerly enumerated) we commend the Vulnerary Spirit of Vitriol. § 7. Lastly, if on the eighteenth or twentieth day, or upon any other day the Wound grows worse, and the fracture of the bone, appears with new symptoms (for the separation of the bone cannot always at first be foreseen) as, much matter not in proportion to the greatness of the Wound; or the Lips of the Wound be turned

inwards; Or dull blackish flesh be bred in wound; then whether the piece of the bone to be separated be great or small, you must see whether it be separated or not, which the Patient may partly know, either by a secret motion in the part, or a pricking pain: the particular cure of which, in what follows, shall be fully laid down.

IV. Of a Fracture with a Wound, wherein no bone is made bare.

§ 1. In this case there is danger of Apostematation, through which some broken bone may drop forth, but this is when they are so separated from the bone, as that they can no more be joyned therewith; this oft times Nature doth perform, although sometimes it is a long time first. § 2. The signs of such like loose bones, Hippocrates de fracturis Lib. 3. Text. 18. has given us, First, that there flows forth many more excrements sanious, than the magnitude of the Wound would naturally admit of: secondly, the Lips of the wound meet not together, or if at any time they do, they seem as if they were broken, or provoked to excretion, becoming as it were loose and spongy, with a kind of tacite motion in the part: thirdly, if the bone be left bare of Flesh, than it self is a sufficient sign of its separation and dropping forth: fourthly, when the bone is shattered into many small pieces, in regard they cannot all of them be easily conglutinated, they foreshew a separation and falling out. § 3. The

Prognosticks follow naturally, for great pain is the sign of an abscess neer at hand: but the time in which the bones may fall forth is various: for in youth, and Summer time, if the bone be not great, it may be twenty, thirty, or forty days: but in one of ripe Age, and Winter time, where the bone is any thing large, it is commonly sixty days or more, before it Apostemates and drops forth. § 4. If the bone is likely to fall forth, being moved out of its place, and sticks in the Wound it self, it is to be drawn forth with the *Volsella* or Pincers, if so be it may be done without pain and violence, otherwise the whole business is to be committed to Nature, which will by degrees separate what cannot be agglutinated; but the bandage ought to be very loose, and often unbound, that the Pus or Sanies may freely flow forth. § 5. Upon the Wound, you must lay digestive, and attractive Medicaments, which have a vehement power of drawing, which what they are, we have already shewed, in several former places. § 6. If the magnitude of the bone like to be separated be extraordinary great, you are to handle the part with very great gentleness, for motion and compression oftentimes creates most vehement pains; wherefore in such a Fracture, such bandage is to be avoided, which in other Fractures are not only convenient but also necessary. In this case *Hippocrates de fract. Lib. 3. Text 21.* tells us, that he made use of no Swaths, but having finished the replacing of the

bones, (so far as could be done) and taken away what bones would easily be removed, he then applyed upon the Wound *Ceratum Piceum*, or some other like; round about (to prevent a flux of humors, inflammation, pain, weakness, and other symptoms) he applyed those coverings called *Splenia* doubled, or the *Plagula* of thin Linnen, about an inch or more broad, and in length to come round the wounded member, about once and a half: for were they longer, at every dressing the member must be lifted up, which would disturb and hurt it; and were they shorter, they would not sufficiently strengthen. These *Plagulae* are first to be dipped in sharp or four Wine, and in number so many as are necessary, which are so to be applyed to the member, that their ends may be drawn by the place affected a little sloping, or so to cross one another in the form of the letter X, in this respect they are very convenient. § 7. Over these *Splenia* there may be another binding; which is compleated only with once rowling about, and so broad as it may cover the whole Wound. § 8. But because that that bandage which ought to hold the Fracture firm, can by no means be used here, the sick ought to have made a wooden Case or Trunk, which is to be put under, from the Hip to the Foot, that thereby the broken parts may be kept in their proper place: in making of this Engin, great care is to be had, for the bottom of the Heel, that it may be fitly situated

red, both in Fractures of the Leg and Thigh. And withal, this you must note, that nothing that is hard be immediately applied to the part; but that betwixt the wounded place and the Instrument, you interpose some of those soft *Splenia* coverings. § 9. *These things being provided, and the Fracture being joyned, you must lay a suppurative, viz. Galens Tetrapharmacum:* you must daily wet the bands with Wine and Oyl, till the fear of the Inflammation is over: then to help Nature in casting forth the bone, you must inject *Decoctum Divinum* and laying on *Empl. Sacrum Galeni*, upon the lips only of the Wound, lay a *Diapalma* about the affected part; and if it may be without pain, lay on single splints. The bones being cast forth, you may heal the Wound with *Ceratum Divinum*. § 10. Lastly, *When the Wound is brought to Cicatrize, the part must be kept in rest, and Ferula's laid round about to confirm the part, and strengthen the broken bone.*

V. *Of a Fracture with a Wound, the bone being made naked of the Periostium.*

§ 1. *The Cure consists chiefly;*
 1. *In a convenient extension of the part:* 2. *By a good conformation, or a convenient joyning together:* 3. *By a bringing the lips of the Wound to touch one another:* 4. *By a fit Ligature:* 5. *By fit and easy position.* § 2. *In binding you must consider whether any part of the bone will come off or not; if none, or but a small bone is likely to come off, the ligature is*

to be made with three bands, and Plasters, as in a Fracture with a simple Wound, and wherein there is the separation of some small bone. § 3. *If a great bone is like to come off, the part affected must be bound with such a ligature, as we have expressed in the former Section.* § 4. *Now if the bone that was made naked, be presently covered with the skin, there is none of it will come off: but contrariwise, if it be long naked and bare of flesh, you may expect excretion, for so the Learned Hippocrates has taught us, de fract. lib. 3. text 44. so likewise nature will cast out all such bones as refuse to be replaced.*

VI. *Of the Symptoms of Fractures.*

§ 1. *The Symptoms of Fractures are manifold; but the primary are, Pain, Inflammation, Gangreen, Itching, and Excoriation.* § 2. *Pain whether great or small, ought to be taken away, for by reason thereof there may be a flux of humours, whereby manifold evils may be excited: You are to consider the Cause, and accordingly to remove it, (causa ablata tollitur effectus) and that, if it be possible, immediately. If the pain is from a bone that pricks, (which is known from handling the part) you must loosen the Bandage, and then either put the Bone back to its place, or (if it may be) take it forth; or else Cut it off: so Celsus lib. 8. cap. 10. advises: it will be best (saith he) to open it, for there is a necessity of cutting off these sharp pricks. If the pain is from*

from over hard Binding, (which is known from the Swelling which appears in the extremity of the part) then the Ligature is forthwith to be loosened. If the pain comes from an ill Scituation, or posture of the affected part, you are so to change the Scituation, and so often, till the Sick feels himself at ease. If the pain is from an afflux of humors, you must cure altogether in the same way, as if it was an Inflammation. § 3. *An Inflammation proceeds from Vehement pain and an afflux of humors, and therefore ought to be opposed in the very beginning, and in that manner as we have express'd under its proper Title.* The Member bound up, must be unloosed, and fomented with Oyl of Roses either alone, or mingled with the White of an Egg; Or, you may apply this following Cataplasin. *R Barley meal ℥iij. Pulp of rotten Apples ℥ij. Pouder of Marshmallow roots, and of Camomil Flowers, A. ℥j. boyl in sower Wine and fair Water, A. q.s. to which add Oyl of Roses, ℥ij, and make a Cataplasin.* Now, till the Inflammation ceases, bind not up the part, or at least, let it not be bound hard, nor impose Splinters, or any other Engine, unless to uphold the part, and keep to the Medicaments. § 4. *A Gangreen often happens unto Fractures, especially if there be contusion withal; and it commonly arises either from taking too much Air, Inflammation, or hard Binding, which how it is to be cured, you may see in its proper places. viz. cap. 24. sect. 4. § 1, 2, 3, Ec. cap. 25.*

sect. 65. § 14. and cap. 26. sect. 21. a foregoing. However the part ought in an especial manner to be fomented with rectified Spirit of Wine, or with Common Spirit, in which Volatile Sal Armoniack has been dissolved. § 5. *If there be Itching and Excoriation or Exulceration, warm water is to be made use of, to wash away the Ichorus Sanies, and dissipate the humor, or call it forth; or water wherein Volatile Sal Armoniack has been dissolved; then anoint with Unguentum album Camphoratum, Unguentum Rosatum, Diapompholigos, decocted juyce of Plantane or Nightshade.*

VII. Of a Fracture with a wound, where the Bone sticks out of the Wound.

§ 1. *Before the reduction, you must consider whether the Bone sticking forth, can be reduced to its place without violence and danger of Convulsion, or not. If it can, let it be reduced, otherwise not.* § 2. *The signs of a dangerous reduction are, a great sticking forth, Inflammation, and hardness of the part by contraction of the Muscles: But the easy reduction is known by a small Bone sticking forth, absence of the Inflamed Tumor, and softness of the part.* § 3. *If therefore it cannot be reduced, of two evils the least is to be chosen: the naked Bone sticking forth must be nipped off with a pair of Pincers and afterwards the Fracture must be joyned by a moderate extending of the part: but the Artist ought to predict beforehand the shortness of the Member, and halting*

of the Sick, lest it should afterwards be laid upon him as his fault; and it is indeed better to make the part somewhat shorter then to leave the Bones not joined together or to extend them Violently, which might bring a Convulsion, and Death of the Patient. § 4. *If the Bone diminished cannot yet be set by a moderate extension of the hand, you must help the extension (as Hippoc. has taught us) with a Levitor, or some cutting Chizel, put in between the broken Bones; the Fracture being composed, the part is to be bound up, as for a Fracture with a Simple Wound.* § 5. *But you ought to cut a hole in the Bands and Plasters, just over the Wound, (because a great Wound, and therefore to be cured by the second Intention) breeds plenty of matter, and so requires often looking to: whereas the diminished Bone (for fear of a new contraction of the Muscles) forbids to lift up the part often, or to unbind the Ligature, for which cause sake we take the middle way to answer the ends of both the Fracture, and the Wound.* § 6. *If the Bone, upon which the Levitor should lean, has in the upper part many broken splints, or something that is sharp, whereby there is no convenient place for the Levitor, they must be taken off with a sharp Chizel; or nipped off with a pair of Pincers: or filed off with a sharp File; or else sawed off with a fine Saw, according as their Position may be, that thereby, a fit place may be made for the Levitor.* § 7. *When the Bone is reduced, you must consider whether any part of the Bone will come off.*

or not: if it be reduced presently, nothing will come off; but if not, something may. If nothing be to come off, bind up the part (having first laid a Suppurative to the Wound) as a Fracture with a Simple Wound. But if something be to come off, order the Bandage as for a Fracture with separation of a great Bone.

VIII. Of a Fracture distorted and ill set.

§ 1. *Fractures being managed by Barbers and unskilful Chyrurgians, are sometimes ill set and distorted, by which the motion of the Member is much hindered, and a halting or lameness caused: this evil is Cured (if the Callous is new, or has not been bred above six months; and the Sick be of a ripe Age and strong; as also the broken bone not very great, and the Action of the part not much hurt) by breaking again the Callous, and rightly setting the bones together.* § 2. *In the first place you must mollify the Callous by fomenting the part for some days with a Decoction of Emollient Herbs, fat Figs, &c. Or applying a Cataplasim made of the same things; Or else an Emollient Emplaster; Or this Unguent following.* R. *Ung. Dialthææ, ʒjss. Bdellium, Galbanum, Ammoniacum, Turpentine, A. ʒss. Marrow of Legs of Veal, Veal suet, Oyls of sweet Almonds, of Camomil, Hens Grease, Mucilage of Linseed and Fenugreek, A. ʒj. Wax q. s. mix and make an Unguent.* § 3. *The Callous being thus softened, your endeavour must be next to break it; which may be done by the help of two assistants, to be drawn*

drawn this way and that way, and so to be extended: but then the Artift must put into its place that which sticks out, or is distorted; and on the part on which the Bones do most incline, lay a Tile wrapt up in Wool, to keep the Fracture right: otherwise the Bone is altogether to be broken, which may be done in the manner aforesaid; Or, by putting the Member in which the Callous is upon his Knee, and so down right to break it with both his hands (as the Learned Sennertus has taught us,) and then the Bone is to be set and cured in all respects as a simple Fracture. § 4. *But if the Callous be old, and of long continuance, or grow hard, and the Patient be weak or aged, Albucasis adviseth by no means to meddle with it, lest dangerous Symptoms should follow; for that it is much better to live Deformed and Lame, than by a cruel kind of Operation, to run the apparent hazard of Life: But if the Callous be old and very hard, it will be a thing impossible to break it, for that, if it should be attempted, the Bone would rather break in some other place; whereby the Deformity would yet remain, and so the Sick would be forced to endure all that cruel Torture in vain.*

IX. *Of a Fracture having too little or too great a Callous.*

§ 1. *If the Callous be too little, the Fracture cannot be firm; if too great, the part will be deformed, or subject to some other accidents: the defect of the Callous, is from the want of that thick Aliment*

which nourishes the Bones; which want comes from either too spare a Diet; or from too hard binding; or from Medicaments too astringent, whereby the flux of the Aliment is repelled or hindered. § 2. The Callous being less than it should be is known by the touch, which is discovered by its being small; as also from the weak motion of the Member, to which add the just now præcited Causes. § 3. The Cure is by allowing to the Sick a full Diet, and Meats that breed a thick and viscid juice; giving inwardly the Stone Osteocola prepared, (viz. ground impalpable upon a Marble) a Dram at a time in Comfrey water, Ptilan, Cock-broth, Veal-broth, or Canary Wine, which Stone as Guilielmus Fabricius saith Cent. 1. Obs. 90. has a most singular vertue to generate a Callous. § 4. For Topicks, a dropacism moderately heating and attracting, being imposed upon the part, is of very excellent use. § 5. A Callous generated too great is caused from too full a Diet, or giving too much of the Stone Osteocola, which is indeed more suitable for Aged persons, and such as are of ripe years, than such as are young. § 6. The too great Magnitude of the Callous is known from the very touch; as also by the pain which arises by the Compression of the Muscles and Nervous part, especially if the Fracture was neer the Joynt, to which also add the præcited causes at § 5. § 7. The Callous too great is to be made less or diminished by Discussive and Digestive Medicaments; frictions of Niter

and Oyl; a fomentation of Salt Brine; as also a Decoction or Cataplasm discussive: or you may anoint with this Unguent, *R Mans fat, Goose and Bears fat, A. ʒij. juyce of Earthworms ʒj. Ammoniacum ʒj. mix them. § 8. If the Callous be harder than ordinary, you must use Emollients mixed with Digestives, as, R Althæa roots ʒj. Roots of White Lillies and of Briony, A. ʒβ. flowers of Althæa and Malloes, A. M. j. Camomil and Melilot, A. ʒss. Seeds of Line and Fenugreek, A. ʒss. boyl in Water or Wine for a fomentation, and of the Mass make a Pultise. Or this, R roots and leaves of Althæa, Bryony, white Lillys, Bears breech, flowers of Camomil and Melilot, A. M. j. Wormwood, red Roses, A. ʒj. boyl in Vinegar one part and Water p. jv. to the Consumption of a third part: with these fomentations foment twice a day, not only till the part grows red and swells, but till it begins to fall and be lank again. Then anoint with the Unguent at § 7. aforegoing; and lastly, apply a Plaster made with equal parts of *Empl. de ranis cum Mercurio*, and *de Mucilaginisbus*, so will the Callous in about six or eight days be not only softened but resolved, extenuated, depressed, and apparently diminished; let the Diet be sparing, and not clammy or viscous.*

X. Of a Fracture with Atrophia, or Sclenderness and weaknes of the part.

§ 1. This is oftentimes caused either from the too long and hard binding of the part; Or from a cessation of the motion of the part; Or from want of sufficient Food and Drink. § 2. In Order to the

Cure, you must endeavour to remove the Cause; Institute a full and nourishing Diet, foment the part with such things as dissolve Congelations, and may attract the Aliment to the part, in which case Dropacisms have good place: you may also anoint with this. *R Oyls of Costus and Camomil, A. ʒss. Oyl of Castor, Ung. Martiatum, Mans grease, A. ʒj. mix them; it is good for broken bones which grow not as they should do. § 3. Inwardly, you must give such things as resolve and open Obstructions, even the most inveterate, among which we commend to you the Volatile Salt of Harts horn, Mans skull and Armoniack, Ens Veneris, Salt of Wormwood, Tamarisk, Spirits of Amber, Rosemary, Marjoram, Time, Fennel, Anise, Carraways, Limons, Oranges, Cloves, Spicknard, &c. given in a due Dose in Canary Wine, twice or thrice a day: to which add Spirit of Sal Armoniack.*

XI. Of the Fracture of the Cranium or Skull.

§ 1. Fractures of the Skull are accounted six fold: first, a Fissure, which is made by a hard and blunt Instrument, and sometimes passes through both Tables, and sometimes through one only. Secondly, a Contusion, made by a hard and blunt Instrument, wherein the Skull is so hurt, that it appears whole from without, but yet is severed from the whole within. Thirdly, a simple Fracture, which is, when a part of the Skull is separated from the whole. Fourthly, an Incision, which is made by a cutting Instrument, wherein either a part of the Skull is raised up, but yet

yet is fast to the other part; Or a part is quite taken away; Or there only remains a mark in the Skull, according to the Figure of the Instrument. *Fifthly*, a Puncture made by a pointed Instrument, seldom passing through both Tables. *Sixthly* a Confracture, which is, when the part struck remaining whole, the opposite part is cleft. § 2. *The Signs are bleeding at the Mouth, Nose, Ears; sometimes Swooning, Vomiting, Swimming of the head, Deafness, Dimness of Sight, the Patient suddenly falls down, grows dumb, after which comes Convulsions, Palsy, Fever and raving.* You ought also to consider the person, if he was strong that did the hurt; Or the Weapon great or sharp; Or if he fell from on high; Or, if the head was bare, the Blow hard or Skull thin, then 'tis very probable that there's a Fracture. Immediately after the hurt, you may sometimes feel the Fracture with your fingers, and if there be a Wound with it, you may either see it, or find it out with the Probe, but let not the Sutures of the Skull deceive you. § 3. *The Prognosticks are gathered from the Symptoms; yet let a Fracture of the Skull look as fair as may be, it is never without danger; but certainly more perillous if both the Tables be broken: yet more dangerous if the Dura mater be hurt; and most of all, if the Pia mater be affected too.* The more, and the greater the Symptoms, the less hopes, and the more grievous, the more deadly: If the Bone grow black in the beginning, Death is at the Door. But if the Pia or

Dura mater be not hurt, but of a good colour, the flesh red, and the Sick can move his Neck, Jaws and Mouth well, there is hopes. § 4. *The general Indications of Cure: First, if the Skin be yet whole, or the Wound not large enough (after shaving the Hair,) you must make a cross Incision, and with a Chizzel or other Instrument divide the Pericranium, and beginning at the points of the Incision, take all up to the Cranium; only take heed that the Section be not too near the Sutures, or Temporal Muscles, or transverse a little about the Eye-lids. Secondly, take Care that you have all provision necessary to stop the Bleeding; Embrocate the head with Oyl of Roses mixed with a little rectified Spirit of Wine; then roul it up: after 24 hours, if Bleeding be not feared, you may open it, and do in each Fracture as we shall hereafter direct. Thirdly, you must be sure to give inwardly such things as strengthen the Heart, and fortify the Animal Spirits, for which we commend to you Tinctures of Coral and Antimony, Syrup of Corals and Pearls, Bezoar Animale, Bezoar Stone, Volatil Salt of Vipers, Spirits of Rosemary, of Angelica, of Sage, of Savin, of Anise, of Caraways, of Limons, of Oranges, of Amber; Tinctures of Saffron and Cochinele, mixed with Syrup of Pomegranates and Mint-water. § 5. *The Cure of a Fissure.* The Fissure sometimes is scarcely conspicuous, so that it cannot be seen but by a Microscope (by reason of the exceeding smallness*

there.

thereof) or unless the Sick holds his Breath. Apply thereto Ink, and as aforesaid, bind up the Wound; The second day, or as soon as the bleeding is ceased, scrape the Skull at once or at several times, untill the Ink with the Fissure is wholly gone, and the Bone grows somewhat Bloody: after which apply this: *Rx Sanguis Draconis, Harts horn burnt, A. 3jss. Frankincense, Orrice roots, A. 3j. Mastich, Myrrh, A. 3ss.* make a fine powder. If the Fissure passes through both Tables, you are to make use of the Trapan or Trifine (lest you suddenly loose your Patient;) the manner of doing which we have taught at large, *Cap. 15. Sect. 39.* aforesgoing. When the work is done, or the Fissure sufficiently pared, you must lay the former powder or dry Lint upon it: (for a digestive, or an Unguent, or any fat thing is very hurtful;) See *cap. 21. sect. 137.* aforesgoing. But to lips of the Wound apply a digestive upon Lint, and upon that *Linimentum simplex*, the Cataplasim of Hippocrates, and the Band called Cancer: this Cataplasim you may make of *Wax p. j. mixt with Oyl of Roses p. ij.* when the Pus or matter appears good, mix derivatives with digestives, till the Wound is perfectly clean, strewing the Bone with the Powder aforesaid, and applying dry Lint thereon; but to the Lips, *Ung. Sarcoticum*, with *Diapalma*, and a trebble linnen cloth dipt in Astringent Wine. Lastly, Incarnate and Cicatrize according to *Art. § 6. The Cure of a Contusion.* This is made in Children sometimes without a Fracture;

but there is for the most part the suspicion of a Fracture; It is cured as *Scultetus* saith, with admirable success with the skins of Beasts new killed, especially of a Dog or Mouse, applied whilst they are yet hot, and left on for 24 hours: If the Contusion be not wholly discussed with one skin, you must lay on another. The skin of a Lamb or Sheep is as powerful as the former; By this one excellent remedy the said *Scultetus* affirms, That he has cured many, as also that it never deceived him: I have also used it three or four times with the like Success; and with the said Famous *Scultetus*, I advise all young Chyrurgians, that they never open Contusions or other Tumors, unless they find them to resist the help of Topicks. § 7. But if with the said Contusion there is a Fracture, as in a simple depression of the Skull, the skin being whole above: this in Children may be without a Fracture, but scarcely in those of ripe Age. In Children the Depression may be raised, as *Paracelsus* has taught, *lib. 9. cap. 3.* excellently with a Cupping Glass, and reduced to its proper place. *Hildanus, Cent. 2. Obs. 5.* invented two helps, viz. a horn-Cup, and a Plaster; which if they prevail not, he advises to the raising of the Bone by the Piercer upon his *Triploides*, but that is both needles and unprofitable, yea sometimes very dangerous, for as much as such depressions in Children which press upon the Brain, hindring the generating and distribution of the Animal Spirits, are mortal; and in others not only makes

makes work for the Chyrurgian, but oftentimes proves very dangerous, because the Levitor being fastned upon the Center of the Depression, the Pit in the Skull is easily made greater. 'Tis true, that manual Operation being neglected, the Cure with danger to the Patient is often prolonged, yet the Prudent Chyrurgian ought rather to omit it, than to lay an Infamy upon Art. The only thing is the aforesaid hot Lambs skin applied for a day or two, with convenient Ligature of the Band called *Cancer*, when the Tumor is discussed, and no great Symptoms appear, apply under the Lambs skin the *Cerate Diapalma* spread upon a broad Linnen Cloth to corroborate the part.

§ 8. *But if there is a Contusion with a depression of the Skull, and a Fracture of the inward Table, without any Wound of the skin or rift in the outward Table, you must presently cut the skin with the incision Knife either Crossways or triangularly, the Pericranium must be parted from the Skull, and the gaping Wound must be kept with Pellets open to see whether there be a Chink or cleft with the Depression.*

§ 9. *But if no such thing be seen in the outward Table, but it appears whole, yet by the ill Symptoms accompanying the Depression, it is feared that the inward Table is broken, the Skull must be opened with the Trapan by the side of the depression, that the matter which is fallen down by the secret Fissure of the inward Table upon the Membranes of the*

Brain, may find a place to come forth, and the Skull that is fallen inwards, may be raised up by help of the Levitor. Now if the Contusion be without a Pit, no manual Operation must be attempted, but only Lambs skins laid upon the place as aforesaid, unless Symptoms shewing the Skull to be broken follow.

§ 10. *But if there is with the Depression a broad rift in the middle of the outward Table, or in one side thereof, it requires the pulling off of the Pericranium. The Crack in the middle of the depression is either broad or narrow; if it be broad, and the Depression not great, the Skull must be raised with the Levitor at Tab. VI. Let. M. N. but if the depression be greater than ordinary, you must raise it with the stronger Levitor at Tab. V. Let. L. L.*

§ 11. *If with a broad crack the skull is gone far in, the said Levitors are then of little use, but you must then be forced to use the Terebra of the Triplodes.*

§ 12. *If the depression has a narrow crack in the middle, then at the bounds of the depression the skull must be cut forth with Trepan; then the distance between the two holes is to be taken away with a turning Saw, which (if rightly made with a double socket and a firm skrew,) is done without the least danger: this done, you may raise the depression with the Levitors, and take away any small fragment of bones which are sometimes parted from the inward table of the skull, and like thorns prick the thick or thin membranes.*

§ 13. *If with the depression*

sion there is a Crack, whether broad or narrow, at the side of the depression; if broad, you must put a convenient Levitor under the skull, and so raise it; if narrow the skull must be evenly terebrated on that side which is sound and bare with a Trepan, and must be lifted up, by help of Levitors: if the Levitor let down at one hole cannot raise the skull, you must make another hole, and then cut forth the distance between these holes with a round Saw, that in what part soever of the fissure, it be needful, the Levitor may be put down, and the Skull raised by it. § 14. *The Cure of a Fracture of the Skull.* If the Crack gape, so that matter may come freely forth from it, there is no need to use the Trepan, or dilate the Wound with an incision Knife; and therefore Chalmetaus saith rightly, that those deserve to be censured and reprehended, who, not only in a small Fissure of the Skull (though it penetrates not) but also in a great fissure, are bold to set on the Trepan, by which great error, the cure is very much prolonged, to the great damage of the Patient. Therefore when (in this case) the Trepan is not necessary, you must follow exactly the cure of a narrow Fissure, after the use of the Trepan. Put down into the hole, a long linnen or filken rag, upon the hard Membrane, answerable to the magnitude of the Fissure, which tye to the thread, and wet it in hot Oyl of Roses, so may it be drawn out at pleasure: and so will the matter running out be turned into quittor,

and the Membranes defended from being hurt by the bone after the rag is put in, stop the place up with dry lint, and upon the naked bone also, lay dry Lint, anointing the lips of the Wound with some digestive, upon which lay *Linimentum simplex*, with a hole in the middle of it, that it stop not in the quittor, then the *Cataplasm of Wax and Oyl*, and the band *Cancer*, annointing the part adjacent with repelling Oyls, to hinder inflammation, and daily, when the Wound is bound up, let the patient promote the coming forth of the matter, that is run to the Membranes of the brain, by breathing out at the nose, keeping the mouth shut. When good Pus appears upon the hard membrane, instead of Oyl of Roses, let down upon the membrane (with the rag tyed to the thread) *Honey of Roses* strained; upon the bone lay dry lint, and upon the lips lint wet, with some detergent digestive; and to cleanse the hard membrane, continue the use of *Linimentum Simplex*, Hippocrates his *Plaster of Wax and Oyl*, the band *Cancer*, and Astringent Oyls. When the Wound and Membrane are fully cleansed, omitting the rag and Honey of Roses, put into the hole a round peller of dry Lint, apply to the bone the powder at § 5: and dry lint; anoint the lips of the Wound with some *Sarcotick Oynement*, over which lay *Diapalma*, with a treble linnen cloth, wet in *Cephalick Decoction* of red Wine, and then squeezed out, with these things, or the

Liniment of Arcaus, let the bone be covered with good Flesh, and produce the Cicatrize with Epu-
loricks according to Art. § 15. *The Cure of an Incision.* If the Skull be cut, you must make it bare, remove the *Pericranium*, and cure it in all respects as a *Fissure* at § 5. scraping the Skull till the Incision is wholly gon. If a part of the Skull is separated, so that the first Table is divided from the second and cleaves to the skin, you must take away the bone, and cure the Wound; Or if a part of the Skull is divided, so that the *Dura mater* is seen, you must reduce the Incision, being cleansed with Canary or S.V. and so keep it either by stitching the lips of the Wound, or rather by fit bandage. Now a smooth chopping away a piece of the Skull, requires no manual Operation, but it ought to be covered with flesh as a skull newly scraped. § 16. *The Cure of a Puncture.* If the puncture pierces not both Tables (as it seldom does) it must be taken off with *Piercers*, or the *Trafine*, which must be put just upon the middle: but if it penetrates through both Tables, the Skull must be opened with the *Trepan* setting upon the point the pin of the *Male Trepan*, until it make a print, upon which the female may stand fast. Now that these operations may be performed quickly, safely and pleasantly, the *Pericranium* must be separated from the bone. In sum, in all Fractures if they be so large or well conditioned, whereby you can free the brain or place from

coagulated or corrupted blood, or from the pricking bones, these aforementioned Operations will be needless: but if otherwise there be a necessity you must use great care in applying the Instruments which ought to be done before the patient is grown too weak, or the Disease be past hope. § 17. *The Cure of a Contra-Fissure.* This is hard to find, yet is known by vomiting of Cholera, a Fever and other Symptoms belonging to a Fracture, the sick will be often putting his hand to the place; and if also you find a Tumor, the *Contra-Fissure* is without dispute: if no Tumor appear, but there are other Symptoms, shave off the Hair, and apply upon the part *Emplastrum Cephalicum* for 24 hours, it is a very good thing, if after taken off, the skin is more moist, soft or swelled than it should be, a Fracture is much to be feared. When the Fracture is found, it is cured as a contusion of the Skull with a Fracture under a whole skin; to wit, by making incision in the skin with a Knife, and separating the *pericranium* from the bone, and (if the crack which penetrates be narrow) perforating the skull with the *Trepan*, &c.

XII. Of a Fracture of the Shoulder.

§ 1. *Hitherto of a Fracture in general terms, and of a Fracture of the Skull, the greatest and most dangerous hapning to the Humane Body: we now proceed to other particular Fractures in order; and the next which offers it self to our view, is a Fracture of the Shoulder.*

§ 2. *The*

§ 2: The Shoulder-bone being broken grows together in 40 days: for it being a great bone, requires a longer time for the generating of the Callous. § 3. The Indications of Cure: First, restore the broken Bones to their proper places, let them be well conjoyned, and so preserved together; how these things are to be done, whether by the Hand or by Instrument, we have largely taught in the general precepts foregoing: in the Extention, let the Sick be kept immovable, let the Shoulder be kept in about the upper part of it, and the broken bone draw this way and that way. § 4. Secondly, To the broken bones set right and strait, apply fit Medicines, such as we have formerly described, then bind it with fit Swaths, beginning at the Fracture it self: but always be careful to bind up the Member in that Figure in which it ought to remain, viz. That the Shoulder with the Elbow may make a right Angle, &c. § 5. Hippocrates binds on the splinters the seventh or ninth day, because of the magnitude of the Muscles of the Shoulder, for that in a longer time those Bones would become slender and loose. But beware that these splints touch not the Extremities of the Joynts: Celsus lib. 8. cap. 10. saith, That they ought on the outside to be very long, somewhat shorter from the brawn of the Arms, but shortest of all under the Wing of the Shoulder. § 6. If the splinters be immediately fastned on, at the very first of all; (as indeed most modern Artists now use,) they ought

then to be tyed on but loosely; and after the seventh or ninth day to be bound harder; and lastly, the Member to be rightly placed, that the Shoulder may not be perverted or turned awry: let the broad Swath which encompasseth the Shoulder, be drawn in a round manner about the Breast. § 7. Let the sick lye upon his back, putting his hand upon his stomach, and soft pillows under the Shoulder, and lift up the Elbow, by a scarf put about the neck, to preserve the Orthogonal Figure, and that the Angle may not be altered, while the Patient sleeps. § 8. If the Shoulder blade is broken about the place where it is united to the Arm, the fracture is for the most part incurable: If it break in the Acromion, (which may be easily felt) then let the Arm or Shoulder be pulled down, extended and set, as we have newly taught: If it be broken into several pieces, make an Incision and take them out, unless they be yet fast to the Periostion, wherein you must leave nature to her self, who will either unite or cast them out.

XIII. Of a Fracture of the Clavicula, or Channel Bone.

§ 1. This is known rather by touching, and by the pain, than by the sight: if it be broken transversely it is the more easily cured, if long ways the more hard: and 'cause it cannot be bound about as other Fractures may, it breeds a Callous causing a very great deformity: The Cure is oft performed in 20 or 24 days. § 2. In the Extention, there must be one to draw the Arm backwards, and

and another to draw the Neck and Shoulders forwards ; the Artift himself in the mean time, drawing upwards what was fallen down, and putting downwards what was raised too high. If a Ball be put into the Arm pit, and the Elbow be pressed against the Ribs, the operation will be the more easy. § 3. If the Bone be shattered into small pieces, pricking the flesh, or causing a difficulty of breathing, you must make an Incision in the same part, and remove them, or cut off the sharp prickles, and then joyn the Bones together : then drawing the lips of the Wound close, apply things proper for a Fracture, and such as may withal hinder Inflammation. § 4. After the Medicine is imposed, three coverings must be provided of a fit length and thickness : two, to fill up the hollownesses on each side the Bone, and a third to be imposed upon the Fracture sticking forth, all which will keep the broken Bone in its due place. § 5. Lastly, it is to be well bound up with a swath four inches broad, and of a sufficient length having a double head ; it is to be made Cross-wise in form of the Letter X ; which is rather to be often drawn about the place of the Fracture, than that it should be too close or hard bound, and it is to be so rouled about that it may draw the Arm unto the hinder parts, which that the Sick may the better endure, Bolsters are to be put under the Arm-pit near the part affected : let not the Ligature be loosened before the seventh day, unless an Itching or

other cause require it : but if it be at any times loosened, let it then also be drawn a little closer and harder.

XIV. Of the Fracture of the Shoulder blade.

§ 1. It is called in Greek *Omo-plata*, in Latin *Scapula*, being a Triangular bone lying near to the Vertebrae of the hinder part of the Neck, &c. § 2. The fracture in the Acromion, or Top of the Shoulder, is more difficultly cured than in any other part of the Shoulder blade. § 3. For the manner of the Reduction see Sect. XII. § 8. foregoing : the Bones being rightly set in their places proper Medicines are to be imposed upon the Fracture, with convenient bandage. § 4. If the Acromion be broken, a linaen Ball is then to be bound under the Wing thereof, and the ligature is not to be loosened before the seventh day, unless some Symptom urge it : let the Sick lye on the opposite side, and keep the part in Quietness as much as he can. § 4. The Cure will be in twenty four days.

XV. Of a Fracture of the Nose.

§ 1. This Bone of all is easiest to be conjoynd again ; but if it be not set right at first, it will never after be reduced, but always stand awry. A *Callus* in the Nostriils is soon bred ; and the Fracture (unless it be corrupted) is in ten days healed ; but in some bodies of an ill habit, the Cure may be twenty days a perfecting. § 2. The Cure. What is raised must be pressed down ; and what is pressed inwards must be raised with a Probe or *Spatha* or other Instrument :

ment : afterwards a Pipe or Quill is to be put up, and continually kept there till the Cure is done, and a Fracture Plaster is to be laid without. § 3. Sennertus advises, That the thing or Instrument to be put into the Nose, to keep it in its due form should be made either of Linnen Rags, or a great Goose Quill anointed with Gums, and covered over with a soft skin : Or a Pipe or Plummet of Lead, or a little staff of Silver wrapped up in a soft skin. § 4. But sponges are to be avoided because they will dilate and swell, and so distend the part, thereby moving the Bones out of their places again, after they have been well set. That which is put up, anoint with Manna of Frankincense, Mastich and Oyl of Roses. § 5. If the Nose be broken obliquely near the Gristle ; you must apply Empl. Glutinosum used in the dry suture or stitching in Wounds, upon little Fillets or Loops, by the which Fillets, you are to extend as much as is convenient : these Fillets let be so long, as that they may be drawn once or twice about the Head ; the shorter ends thereof you may agglutinate to the Forehead ; the long ends may afterwards be drawn below the Ears, and so tyed about the Head ; by this means the Nose may be either straightned or thickned according as you find occasion. § 6. If the Tents which are put up into the Nostrils cause any pain, they are to be taken away, and the Nostrils to be kept straight with the aforesaid Bandage, which after fourteen days space

may be removed, and a fit cerat laid on in place thereof. § 7. If the Bones be shattred into small pieces, you must avoid taking of them out if possible, because of deformity, and as much as may be reduce them to their places, after which apply some strengthening and confirming Cerate. § 8. If there be a Wound with the Fracture, then an Emplaster fit for Bloody Wounds is to be laid on : But if an Ulcer should breed within the Nostrils you must anoint the Tents, with Medicines proper thereto, and by all means you must take Care, that no flesh grow within for which purpose the Leaden Pipe is of singular use. Outwardly Paræus applys this. R Frankincense, Mastich, fine Bole, Sanguis Draconis, A. ʒss. Roch Alum, Pine Resin A. ʒij. all being in fine Powder, mix with the White of an Egg.

XVI. Of a Fracture of the Jaw Bone.

§ 1. If in the Fracture there is not an Inflammation from the very beginning, the cure may be completed in twenty daies, the Teeth remaining safe : but if it be longer in healing, they may be vitiated, and rendred unusefull. § 2. It is restored by ones fingers used both within and without the Mouth ; and if they be too weak, then one is to draw the Head backward, and the Chyrurgion forward, and reduce the fractured Bone to its place. § 3. This done, some Medicine which is proper and fit, is outwardly to be applied to the Jaw Bone, that so the broken Bones being set together again, may be firmly fastened

ned in their Seats; as also you may apply a little Bolster of Leather, or some other matter answering in length to the Jaw-bone, with convenient Ligature. § 4. Let the binding be with a Swath, slit at both ends, two fingers broad, and in the middle part of it cut also long-ways, that it may one both sides take in and contain the Chin: and therefore there being four Heads of the Swaths thus slit at both ends, the two lower of them, are to be brought and drawn along to the top of the Head, and there to be tied together, or sewed to the Night-Cap: but the two uppermost are to be drawn to the lowest part of the Head behind, and tied together, or sewed as aforesaid. § 5. Let the Sick lye upon the contrary Jaw-bone, viz. upon that is not broken, but let him not rest thereupon, but upon his Head, least the Fracture should renew, or the Bone goe awry: keep the Jaw as much as may be at rest; let him not speak much, or chew any hard thing, but be nourished with soft and moist food till the Callus is hardned: on the third day dress it, and regulate what Symptoms you find to appear.

XVII. Of a Fracture of the Arm.

§ 1. The Fracture of the Os humeri is more easily Cured, than the Fracture of both Radius and Cubitus; and a Fracture of one of the said Bones is more easily cured than of both: but if both Bones be broken together, the Operation will be the more difficult: the

Consolidation is commonly made in about thirty days. § 2. If the Os humeri is broken, first bend the Elbow towards the Breast, and take hold of the lower part of that Bone close to the Elbow, pulling it straight down towards the Ground, so replace it: but Note that the Arm during the whole time of the Cure, must remain in that form in which it was extended, for otherwise upon the least change thereof it will slip out again. § 3. But after the second or third dressing, as often as the Sick is dressed, he must stretch out his arm straight, to the end that the Tendons which run from the Arm, and are inserted below the Elbow, contracting themselves by the long bending of the Elbow, might not cause a very troublesom stiffness. § 4. This stringing of the Tendons (which Barbers and Ignorant Chyrurgians call the shrinking of the Nerves) may yet easily be cured in ten or twelve weeks time, if you make the Patient to carry every day some fit or proportional waight: and then withal endeavour to soften and relax the Tendons, with emollient Fomentations and Embrocations, (abstaining from all use of Brandy, hot waters or Astringent Medicines;) for which purpose this following is exceeding good. R Mans, Goose, and Ducks Grease, A. ʒij. Oleum Catellorum, Unguentum Althææ, A. ʒss. Oyls of White Lillies, of Camomil, of Earthworms, A. ʒij. mix them. § 5. The Elbow has two Bones, viz. the upper and greater called Radius; and the lower and lesser called Cubitus or Ulna.

ment : afterwards a Pipe or Quill is to be put up, and continually kept there till the Cure is done, and a Fracture Plaster is to be laid without. § 3. Sennertus advises, That the *tring* or Instrument to be put into the Nose, to keep it in its due form should be made either of Linnen Rags, or a great Goose Quill anointed with Gums, and covered over with a soft skin : Or a Pipe or Plummet of Lead, or a little staff of Silver wrapped up in a soft skin. § 4. But sponges are to be avoided because they will dilate and swell, and so distend the part, thereby moving the Bones out of their places again, after they have been well set. That which is put up, anoint with Manna of Frankincense, Mastich and Oyl of Roses. § 5. If the Nose be broken obliquely near the Gristle ; you must apply Empl. Glutinosum used in the dry suture or stitching in Wounds, upon little Fillets or Loops, by the which Fillets, you are to extend as much as is convenient : these Fillets let be so long, as that they may be drawn once or twice about the Head ; the shorter ends thereof you may agglutinate to the Forehead ; the long ends may afterwards be drawn below the Ears, and so tyed about the Head ; by this means the Nose may be either straightned or thickned according as you find occasion. § 6. If the Tents which are put up into the Nostrils cause any pain, they are to be taken away, and the Nostrils to be kept straight with the aforesaid Bandage, which after fourteen days space

may be removed, and a fit cerate laid on in place thereof. § 7. If the Bones be shattered into small pieces, you must avoid taking of them out if possible, because of deformity and as much as may be reduce them to their places, after which apply some strengthening and confirming Cerate. § 8. If there be a Wound with the Fracture, then an Emplaster fit for Bloody Wounds is to be laid on : But if an Ulcer should breed within the Nostrils you must anoint the Tents, with Medicines proper thereto, and by all means you must take Care, that no flesh grow within for which purpose the Leaden Pipe is of singular use. Outwardly Paræus applies this. *R* Frankincense, Mastich, fine Bole, Sanguis Draconis, A. ʒss. Roch Alum, Pine Resin A. ʒij. all being in fine Powder, mix with the White of an Egg.

XVI. Of a Fracture of the Jaw Bone.

§ 1. If in the Fracture there is not an Inflammation from the very beginning, the cure may be completed in twenty daies, the Teeth remaining safe : but if it be longer in healing, they may be vitiated, and rendred unusefull. § 2. It is restored by ones fingers used both within and without the Mouth ; and if they be too weak, then one is to draw the Head backward, and the Chyrurgion forward, and reduce the fractured Bone to its place. § 3. This done, some Medicine which is proper and fit, is outwardly to be applied to the Jaw Bone, that so the broken Bones being set together again, may be firmly fastened

ned in their Seats; as also you may apply a little Bolster of Leather, or some other matter answering in length to the Jaw-bone, with convenient Ligature. § 4. Let the binding be with a Swath, slit at both ends, two fingers broad, and in the middle part of it cut also long-mays, that it may one both sides take in and contain the Chin: and therefore there being four Heads of the Swaths thus slit at both ends, the two lower of them, are to be brought and drawn along to the top of the Head, and there to be tied together, or sewed to the Night-Cap: but the two uppermost are to be drawn to the lowest part of the Head behind, and tied together, or sewed as aforesaid. § 5. Let the Sick lye upon the contrary Jaw-bone, viz. upon that is not broken, but let him not rest thereupon, but upon his Head, least the Fracture should renew, or the Bone goe awry: keep the Jaw as much as may be at rest; let him not speak much, or chew any hard thing, but be nourished with soft and moist food till the Callous is hardned: on the third day dress it, and regulate what Symptoms you find to appear.

XVII. Of a Fracture of the Arm.

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Consolidation is commonly made in about thirty days. § 2. If the Os humeri is broken, first bend the Elbow towards the Breast, and take hold of the lower part of that Bone close to the Elbow, pulling it straight down towards the Ground, so replace it: but Note that the Arm during the whole time of the Cure, must remain in that form in which it was extended, for otherwise upon the least change thereof it will slip out again. § 3. But after the second or third dressing, as often as the Sick is dressed, he must stretch out his arm straight, to the end that the Tendons which run from the Arm, and are inserted below the Elbow, contracting themselves by the long bending of the Elbow, might not cause a very troublesom stiffness. § 4. This shrinking of the Tendons (which Barbers and Ignorant Chyrurgians call the shrinking of the Nerves) may yet easily be cured in ten or twelve weeks time, if you make the Patient to carry every day some fit or proportional waight: and then withal endeavour to soften and relax the Tendons, with emollient Fomentations and Embrocations, (abstaining from all use of Brandy, hot waters or Astringent Medicines;) for which purpose this following is exceeding good. R. Mans, Goose, and Ducks Grease, A. ʒij. Oleum Catellorum, Unguentum Althææ, A. ʒss. Oyls of White Lillies, of Camomil, of Earthworms, A. ʒij. mix them. § 5. The Elbow has two Bones, viz. the upper and greater called Radius; and the lower and lesser called Cubitus or Ulna.

§ 6. Whether one or both be broken, you must make a proper Extension, and conform the parts: if only one of the Bones be broken, the strongest extension ought to be in that part: but if both be broken, the extension ought to be equal. § 7. The broken Bone being thus replaced; all things are here to be performed, which we advised in the general Cure of a Fracture, and then at length it is to be bound up, and rouled about with Swaths. § 8. Lastly, the part must be well placed, and in a good form, viz. the Hand must lye a little higher (upon the Breast) than the Elbow, least Blood or humors should flow to the Fracture. And afterwards every second or third day, the Arm is gently to be stretched out, that the humors which flow thither, and stay there too long, may not cause a concretion in the Bones, a Contraction in the Tendons, or stiffness in the Arm, not afterwards to be remedied. § 9. A Fracture of the Os humeri is cured in forty days: of the Radius and Ulna in thirty daies.

XVIII. Of a Fracture of the Sternum, or Breast Bone.

§ 1. It is known by an Unevenness, which being touched will yield to the Fingers, and cause some Cracking; or else be pressed in, and then you will feel a bending inwards, which will cause pain, shortness of Breath, Coughing and Spitting Blood. § 2. It is very dangerous, by reason of the Pleura Membrane, (which is easily hurt with it) and the noble parts which lye under it; but because it is soft, spongy, and thin, it is

consolidated in twenty or twenty four days. § 3. To restore the same, the sick is to be laid upon his back, on a great Stone, pressing both his Shoulders downwards, then press the Ribs backwards and forwards, till the Bone is reduced into its right place. § 4. Sennertus advises a pillow to be put under the Spina or Back Bone over against the Fracture, and then observing the newly related directions, the Chyrurgian is to press together on both sides, till the bones are brought to their right places. § 5. After this, those medicines which are wont to be imposed on other Fractures, serving for conglutination, and to prevent Inflammation, are to be applied here, and the binding is to be done with fit swaths, above the shoulders, in the form of the letter X, which binding ought not to be made too hard, lest it hinder the breathing.

XIX. Of a Fracture of the Ribbs.

§ 1. If the internal part of the rib is broken, there is a very great and grievous pain, much resembling the Pleurisy, difficulty of breathing, and a troublesome Cough, with sometimes spitting of blood, to which a Fever is also adjoynd: the flesh lying upon the ribs is puffed up, which is known both by touch and sight; and if the place is pressed with the hand, there is heard a certain noise and sound of Air going out thereof. This if not timely remedied proves to be an Inflammation, to which an Apostem succeeds; and sometimes corruption of the bones of the ribs, § 2. If the Fracture is

inward; it is for the most part deadly, if it be single without any contusion, or bruising of the parts adjacent, there is little or no danger, and the ribs will grow together again in 20 days: but if there be contusion withal, it is dangerous, because of the afore enumerated Symptoms, as Hippocrates witnesseth *de Artic. Lib. 3. Text. 65.* If the Rib is broken inward as aforesaid, there is great danger of death, especially if it prick the Pleura membrane, whereupon commonly mortal symptoms follow; if it be cured, it is not accomplished under forty days.

§ 3. *The Cure.* If it be a simple fracture, it is performed only by laying on the Fracture Plaster. Some to place the bone right apply Cupping-glasses, but they are hurtful. If the ribs stand out, they must with ones hands be pressed in: if they bend inwards let the sick keep in his breath, and so press the rib outward, in the mean time assisting with your hand.

§ 4. *But if those things succeed not, you must apply a sticking Emplaster; and pull the same so often, till the rib return to its place.* For this purpose, *Parvus Lib. 15. Cap. 11.* prescribes this; *R Turpentine, Rosin, black Pitch, Mastich, Aloes, Wheat Flower, of each a sufficient quantity,* mix and make a plaster, which spread upon a strong new cloth: when it has stuck sometime, pull it suddenly with great violence, from below upwards, so will the rib fall into its place: this must be don often till such time as the sick find ease, and breaths more easily. *Sannetum* has this *R fine*

Wheat flower, whites of Eggs, A. ʒij. Ichthyocolla ʒiss. Bird-lime ʒvj. Tragacanth, Frankincense powdered, A. ʒv. Rose water (but Poppy water is better) enough to mix them. § 5. *If the Membrane Pleura be pricked, by any fragment of bones, the part is to be opened with an Incision knife, that you may take away or cut off the said fragment, and then cure it according to Art.* § 6. *If the rib is broken and not removed apply things to consolidate the Fracture and repress the Inflammation, as a plaster of Frankincense, Wheat flower, fine bole, and the white of an Egg, or some such like.* § 7. *If there be a contusion or bruise, give inwardly Spirit of Sal Armoniack, in a proper Vehicle: bath the part with this, R Rose water ʒij. Volatile Sal Armoniack ʒij. S. V. ʒij. mix and foment therewith warm.* Then apply Discussives, and such things as repress an Inflammation; as *R Barly meal, powder of Roses, Balauſtians, Cypress Nuts, Galls and Tormentil roots, A. ʒss. whites of Eggs N° j. Oyls of Roses and Camomil, A. q. s. make a Cataplasim.* § 8. *If it degenerates into an Abscess, you must open it speedily, lest the matter foul the bones; then cure it according to Art.* In this case, it will be necessary that the sick be as quiet as may be, compose himself to rest; takes a particular Traumatick Diet, and once in 5 days. purge with some magistral liquid Cathartick, as that of *Grulingius* universal: If these things take not effect, the Sick falls into a Consumption, and so dies.

§ 9. *Lastly, Although*

(the Ribbs being reduced) nature will indeed generate a Callous, yet Sennertus thinks that this following Emplaster as one of the best and chiefest, may be imposed to give assistance therein. *R. Powder of Myrtles, Red Roses, A. ʒj. Meals of Barly, Grobus, Lentills, Beans, Mastich, Aorn cups, rinds of Cypress nuts, Frankincense, Sanguis Draconis, Terra Lemnia, Aloes, Myrrh, A. ʒij. Oyls of Myrtles, of Roses, and Oyl Omphacine, A. ʒix. Wax, Turpentine, A. lbss. mix and make an Emplaster.*

XX. Of a Fracture of the Spina Dorsi, or Back-Bone.

§ 1. It is known by a Cavity in the Place, with a pain and pricking, as Celsus tells us lib. 8. cap. 9. and if any process of these Bones be broken, it may be discerned by the touch, because that it may be moved this way and that way: and if the Sick lyes upon his Face the pain is so much the greater, because the skin is extended and the flesh bruised and prickt with the broken fragments as if they were Thorns or Goads. § 2. A Simple Fracture is easily set with ones Fingers, and is consolidated in twenty days. But if the Marrow be hurt or pressed in, whereby the Arms or Leggs of the Sick become Senseless, or that he cannot retain his Urine or Excrements. Death commonly follows; this more especially if the Fracture happen in the *Vertebrae* of the Neck: Moreover, a Fracture in the said *Vertebrae* of the Neck, if the Sick escapes, commonly causes a Palsy in the Arms and Hands: if the Fracture is in the Inferiour parts,

there follows a Palsy, of the Thighs, Leggs and Feet, and this is deadly, for both Nerves and Spinal Marrow are hurt in these Cases. § 3. Although there is but little hope, yet (not wholly to leave the Sick helpless) the broken Apophyses of the back-Bone, are to be put back into their own places (if not quite broken off) and those Medicines applied which are commonly applied in Fractures, viz. such as ease pain prevent Inflammation, and helps conglutination. § 4. If the Process be wholly broken off from the Periostrion, and is altogether loose, you must make Incision and take it out, and after the Wound is to be healed according to Art: The same must be done, if other Fragments prick the Spinal Marrow or parts adjacent.

XXI. Of a Fracture of the Os Sacrum, and Crupper-Bone.

§ 1. These if they shall be so broken and bruised, that thereupon the Spinal Marrow be hurt, the affect is very dangerous, if not mortal, for the reasons shewed in the former Section. § 2. The Rump or Crupper Bone is composed of four Bones: the first whereof has a Cavity; wherein it receives the lowest *Vertebrae* of the *Os Sacrum*: the other three are joined together by *Symphysis* or *Coalition*, at the end of these hangs a certain small Gristle. § 3. The Cure is to be ordered as the former, but these have this thing peculiar, that by putting your Fingers into the Anus, and thrusting to the fractured place, you may reduce the Bones to their true Situation: for thus you may thrust the

the Fragment forth, and fit and restore it to the rest of the Bones by your other hand lying upon the Back. § 4. Let the Sick keep his bed during the whole time of Cure, letting Medicines fit for Fractures be applyed: if he fit let the seat be perforated.

XXII. Of a Fracture of the Os Ilium, or Hip bone.

§ 1. The Hip consists of three bones: the first is called Os Ilium the Haunch bone; the second is called Os Ischion, the Huckle bone the third is called Os pubis the share bone. These three bones in men of full growth are so fast knit and joynd together, that they can by no means be separated, but in Children they may without much ado. § 2. A Fracture of this Bone is known by pain, a pricking, depressed cavity, inequality, and numbness of the Leg on the same side. § 3. The Fractures of these Bones are commonly consolidated in the space of 24 days, especially if it be suddenly set, otherwise you may expect various accidents. § 4. If it be broken into shivers or many pieces, you are forthwith in the first dressing to make Incision, take out the small Splinters, and replace those which have yet any fast hold: In doing of this, you must have a care that you hurt not the Veins, Arteries, Nerves, Tendons, or heads of the Muscles, for which reason make Incision cannot be made without great danger. § 5. The small splinters being taken away, those Fragments which are not separated from the Periostion, reduce and set in Order with your fingers,

and then pursue the Cure as necessity shall require.

XXIII. Of a Fracture of the Thigh-bone.

§ 1. Celsus lib. 8. cap. 10. saith if the Thigh be broken, it must of necessity be made shorter, because it never more returneth into its old place: this Opinion of Celsus, Peccectus lib. 4. cap. 24. expounds to be, when the part is less extended than need requires, and when the Bones are not well and exactly set together: for we see daily, many having had a Fracture of the Thigh, to walk straight and upright without any lameness at all: and so Avicenna lib. 4. par. 5. Tract. 3. Guido Tract. 5. Deff. 1. cap. 7. Vigo lib. 6. cap. 14. Andreas Chyrurg. lib. 2. cap. 14. and Guil. Fabricius with many others affirm: all this is to be understood if the Thigh be broken near the Hip. But if it be broken towards the Knee, or in the midst, if care and diligence be used in the Cure it may certainly be healed without lameness, or any great difficulty. A Fracture of the Thigh will in fifty days be brought to grow together again and not sooner, in regard that it is the greatest of all Bones, and therefore requires a longer time for the generating of a Callous. § 2. The Extension must be very strong and forcible, because the Muscles which encompass the Thigh are greater then all the rest, and therefore being contracted are the harder to be extended. This if it be in one of ripe years, will scarcely be done without an Engine or Instru-

ment, for which purpose we commend either the *Pulley of Visserius* or the *Glossocomon* of *Galen*, which we have before described Sect. 2. § 3 and 9. *Hippocrates* in this Bone when it is broken doth approve of Extension so much, that although by the greatness of the Extension, the ends of the Fragments be somewhat distant asunder, an empty space being left between, yet notwithstanding would he have a Ligature made: for it is not here, as it is in the Extension of other Bones, where the casting about of Ligatures keep the Muscles immovable: but in the extended Thighs the Ligature is not of such force, as that it may stay and keep the Bones and Muscles in that State where-in the Artist has placed them, by reason that they are large and strong, and overcome the Ligation. See *Paræus lib. 15. cap. 20.* where he also advises, because the Thigh Bone is hollowed on the inside, and Gibbous on the outside, that it may be set in its native Figure, by putting into the Hollowness a Compress or Boullster spread over with *Ung. Rosatum*, or the like Glutinous thing, that it may not fall off: otherwise the Patient would halt and be lame all his Life after. § 3. *Due Extension being made, let a proper fit Medicament be applied thereto, and the Fracture conveniently bound up with good Ligature: Sennertus lib. 5. par. 5. cap. 11.* saith, It will not be amiss to cut in peices linnen Cloths and to wrap them round about the Hip, and near the

Guts, as likewise the Groins and *Perinæum*; for by this mean the naked parts will only not be defended from the Splinters, but thereby a fluxion may in some Measure be prevented. § 4. *The placing of the part is next to be considered, which is to be put into Junk or Case, so large or Long as it may take in the whole Thigh from the very Hip to the Foot, in the end of which near the Foot there ought to be a hollow for the Heel. Be sure that the part lyes first soft; Secondly smooth and even: Thirdly, that it lye rather somewhat higher than the rest of the Body: this Junk or Case is to be bound on with many Bands both to the Thigh and Legg, and on both sides Woollen Cloths are to be applied, that the Member may not decline either way: all this is to be done that the Sick may lye free from pain, or as much as may be a ease, that so he may not move the part. § 5. And this you may also observe, that if a Swelling arises in the Ham or parts beneath it greater than what might be expected: that the Ligature is too hard, and the splints too strongly bound on, whereby the part is pressed too much, and therefore you ought to loosen the Binding, but the Tumor is to be fomented or anointed with such things as are Anodyne, Digestive, and Repercussive, applying to it Cotton or Lint dipt in Oyls of Roses, Myrtles and Whelps. § 6. The Ancients advise that the Ligatures should be loosed every third day, to the tenth day; and from thence on, every seventh day; but*

for this there is no certain rule ; for according to the Accidents the Sick ought to be dressed sooner or later, more often or seldom, renewing the Ligatures with the dressing : if no Symptom urges, let not the first dressing be moved unless as slowly and seldom as may be : broken Bones have very much need of Rest, towards the breeding of a *Callus*, which is begun about the thirteenth or fifteenth day, and may be much farthered, by applying Catagmatick Emplasters.

XXIV. Of the Fracture of the Knee pan, called Patella.

§ 1. This is easily known by the distance of the broken Bones, being discerned by the Touch, by the Patients weakness and disability in going ; by the Cavity which is in the place where the Fracture is ; by its motion ; and by the Crashing noise or sound in the handling thereof. § 2. If it be rightly set, and so preserved, it easily grows together again ; more especially if the Fracture is made in the length thereof : If the Fracture be made Cross-wise, the Patient for the most part Halts all his Life after ; because that the Concretion of the Callus being produced the Consolidation doth hinder the free bending of the Knee ; so also if it be broken transversely or obliquely. § 3. The Patient saith *Paræus lib. 15. cap. 22.* must necessarily be kept in his Bed for fourty days : you must compose it thus. The Legg is first of all to be extended or stretcht forth (in which posture it must be kept during the whole

Cure :) then the broken parts are to be conjoyned again, and an Emplaster or Cataplasim proper to the Fracture is to be laid on, then the hollowness of the Ham is to be filled with a Boulster, least the Knee shoul bend unawares, whereby the Fragments of the Knee pan would again fly in sunder ; afterwards with fitting Ligature bind up the part. § 4. Lastly, with junks of straw (as in a Fracture of the Thigh or Leg) let the member be fixed and kept immoveable, taking great care that the Knee be not bended in the least Measure : if sharp fragments of Bones be separated, some advise to cut the skin and take them forth ; but this ought to be done with care and caution.

XXV. Of a Fracture of the Legg.

§ 1. The Legg consisteth of two Bones : that which is the thicker and is scituated in the inward part of the Legg, is called *Tibia* or the *Shin-Bone* : but the thinner and outward Bone is called *Fibula* : these Bones are broken sometimes but one of them only, and sometimes both of them together ; and the Fracture is either in the midst, or in the upper or in the nether part. § 2. When both Bones are broken, the Legg may be bended and bowed any ways. The Fracture of the *Shin-Bone* may be known both by sight and touch. But the *Fibula* being broken is not so easily known, because it is covered with much flesh, but for the most part, the broken parts inclines inwards. § 3. One bone being broken, is more

easily cured than if both be broken : the Fibula being broken is more easily cured than the Tibia ; for the Shin-Bone is cured with much more difficulty, because as there is need of greater Extension, so the Sick is much longer before he may venture to walk : the Consolidation seldom happens in less than forty days. § 4. *In the Cure whether one or both of the Bones be broken the Legg is to be extended that the Bones may be reduced and joined together.* This is most commonly done by too strong persons : if by the hand it cannot be accomplished the reduction must be done by Instrument, as we have formerly taught. § 5. *The Legg being extended and Bones set right, you must impose convenient Medicaments, and then it is to be rowled about with Swaths, as we have formerly directed, which ought to be both broader and longer than in the Arm : And the Legg is so to be disposed of, that it may not be turned awry unto any part, least the Bones be discor'ded, which may be done by junks of Straw and a wooden Case, as we have already advised. The Splinters are not to be applyed upon the extremities of the Bones sticking out : Nor upon that Tendon which passeth along from the Legg to the Foot, and is knit unto the Heel, by reason of its exquisite Sence which will not endure Compression.* § 6. *After the seventh day, when all fear of Inflammation is past : Hippocrates de Fract. lib. 3. Text. 23. 27. 32. 41. adviſeth to lay on the Ferula's with the Plagets and the*

upper Ligature and to bind them fast with three Girts. His Words are these. Then at length things necessary being provided, the Fracture being joyned (the part being yet extended in a mean Figure) we must bind it with a linnen rouser, laying the beginning of the first band upon the Fracture, so that it may hold it firm, but not yet press it violently : when you have rap't the first band about the same place, the second and third time, you must carry it upwards, that you may thereby stop the flux of blood coming to it, and there let that end ; and that band in respect of the second, must not be long in Comparison. The other band, at the beginning of it, being Wound about the Fracture once, must then be carried downwards, and not pressing so much, it must take greater distance in rowling of it about, so that it may come to that place where the first did end. After these Plagets smeared with some Cerate are to be laid on, for so they will stick the faster and smoother, which must then be bound on with rowlers, (but a band with too ends will perform the office of 3 bands,) changing the order so among them, that they may be carried sometimes to the right hand, sometimes to the left hand, and very much indeed from the lower parts upwards and sometimes from the upper parts, they must be carried downwards. But when the fear of Inflammation is past, you must lay on the Ferula's, and they are to be contained with bands very loose that they may stay only there, and that the laying on of the Feruties may not add any pressive to the part. § 7. If need be, or Symptoms increase, you must

mult use convenient Parging with a Vulnerary Diet: let the Sick eat very sparingly at first, and be as much as may be at rest and quiet.

XXVI. Of a Fracture of the Bones of the Feet.

§ 1. Hippocrates saith, That the Bones of the Feet (as also of the Hands) cannot be broken, without a Wound of the fleshy parts by something very sharp or heavy: because these Bones are harder than ordinary, and therefore cannot suffer without hurt of the adjacent flesh. Paulus Agineta lib. 6.

cap. 106. saith, That the Anckie Bone can by no means be broken, not only by reason of its hardness, but because also it is guarded and defended round about.

§ 2. A Fracture of the Bones of the Foot is found both by sight and touch, because those parts have but little flesh about them, for commonly they stick forth upon their breaking.

§ 3. A Fracture in these parts is not very dangerous, or of difficult cure, yet because the Member is full of Nerves which are generally bruised and Wounded, there is most grievous pains, Inflammations, and other evil Symptoms excited: if a violent flux follows, the Cure will be exceeding difficult, by

reason it is a depending part: otherwise they for the most part will be consolidated in about twenty days, except the Fracture be near the Anckle, for then a longer time is required.

§ 4. The Cure is nearly the same with that in the Hand: there ought to be a due Extension, and then with the Fingers the broken Bones to be put into their proper places, which will be best done if the Sick stands with the Fractured Foot upon a Table, covered with a Woolen Cloth. This done let proper Medicaments be applied, and let the Foot be wrapped about with Swaths. Splinters cannot well be applied to the Foot, therefore you ought to use the Splenia coverings, binding the Bones with Swaths so that being set in their right places, they may be kept there. § 5. The Foot is to be situated in a straight Figure, and not crook'd, least Action thereof be binared or depraved. § 6. You must also take all imaginary care to hinder as much as may be Inflammation, and prevent defluxion of humors, for as much as if that they once have a recourse to those parts, they seldom or never after without great difficulty suffer a revulsion.

CHAP. XXVIII.

Of DISLOCATIONS.

I. **O**F the Cure of Dislocations in general.

§ 1. In Dislocations or Luxations, having considred the place, and put the sick into a fit posture, carefully extend it, as we have taught in Cap. 14. Sect. 10, 11, and 12. and with your Fingers or fit Instrument, forcing the Dislocated Bone to the contrary way, carefully reduce it. § 2. Then anoint the Joynts with Oleum Catellorum, Hypericon, or the like, and lay over it Diacalciteos, or Strickium Paracelsi, rowling it up well. § 3. But it will be better, if after anointing, for the first day or two, you apply a Cataplasim of Bole, and the White of an Egg. § 4. If there be a Tumor withal, anoint it well either with the aforesaid Oyls, or Oyl of Elder: and apply a Cataplasim of Oatmeal, Linseed, Oyl of Roses, and Milk, and it will abate; but if the Tumor be not above two or three days standing, by reducing the Bone, it will presently vanish. § 5. If with the Luxation, there be a Fracture also; first reduce the Dislocation, then the Fracture, which foment with red Wine warm, and apply a Cloth wet in Oyl of Roses, whites of Eggs, and Oxicrate mixed together, and with Splints (as we have taught cap. 27. sect. 1. § 3.)

bind it up, not stirring it till the seventh day, except pain or Inflammation force it, at what time foment it with hot water in which Saccharum Saturni or Lapis Prunellæ are dissolved, after which proceed by the former rules till Health is recovered. § 6. If with the Luxation, there be a Wound: first with Lenitive Medicines take care of it, then look to the Dislocation: but if they possess both one place, at one time, first respect the Dislocation, then the Wound applying over all Strickium Paracelsi.

II. Of a simple Dislocation.

§ 1. In the Cure of a simple Dislocation Sculterus shews five Intentions, viz. Extension, Reposition, Deligation, Deposition, and Religation. § 2. In Extension four things are to be observed, viz. 1. Time. 2. Instrument. 3. Manner. 4. Quantity of the Extension. The Time saith Hippocrates, Is presently after it is put out of Joynt, while the part is yet hot: but if it cannot be done presently, by reason no Physician is near, it must be done the second or third day, except Inflammation hinder it: on the fourth day nothing must be attempted, because of great pains, for then it would not succeed well, but many ill Symptoms would follow: and there

therefore the term of the Inflammation must be expected, which is the seventh eighth or ninth day (as Hippocrates de Artic. lib. 4. Text. 65. saith) unless it can be reduced in the first three days: but on the tenth, eleventh and twelfth days it is not safe, because the Callous is bred: but before Excretion let the Joynt be fomented with warm Water and Oyl, or decoction of Mallows or Althæa; Spigelus saith, That nothing is better than a Bath of Sweet Water. § 3. The Instruments of Extension are Our hands for small Dislocations; Bands for such as are mean: and Engines for such as are great. The Bands ought to be strong soft and tractable, such as Bucks skins dressed soft; or for want of Leather linnen Cloth rubbed: you must fasten them on the part which is farthest from the Joynt dislocated, lest the Muscles should be bound, or else torn by violent Extension. Engines or Instruments are such as we have at large described cap. 27. sect. 2. § 3, 4, 7, 9, and 10. aforegoing. § 4. The manner of the Extension we have sufficiently taught in the former Chapter of Fractures, however it ought to be as straight as possibly it can, viz. in a Right Line, for so Extension is made without pain or difficulty. § 5. The Quantity of the Extension is known from the place where the Luxation is: the way that the Bone slipped forth; the place to which it is fallen, and where it rests: when Extension is almost made, the Swooning of the sick, or of the standers by must not hinder

the Operation. § 6. Reposition is done by the hands of the Artist, which ought to be anointed with Oyl of Roses: and it is either made by Circumgyration, or by forcing it back to the opposite part to which it is fallen; but these Motions are not always necessary, because that sometimes when Extension is made, the Muscles are only relaxed (not contracted) so that the joynt will slip into its natural place of its own accord. Now if it is well set, you may know it, by the natural shape of the Member, when neither hollownes nor Swelling appears about the Joynt, as it did before it was set: by the abatement of the pain, which is always an inseparable Sign that the Bone is reduced, but the pain may not be ended, because the Muscles may be very much hurt: and sometimes by a kind of Crack which the Bone makes when it falls into its Socket. § 7. Deligation is considered from the Figure of the part affected, and the Ligature itself, which may preserve the Joynt reduced, and prevent Inflammation. § 8. In the Figure you must consider the form both of the Joynt reduced, and also of the whole part, some Figures are natural and without pain, and some are unnatural and with pain. The Figure of the Arm without pain, is bended; of the Foot perfect extension: Now the Figure in which the part must stand, must be ordered before it be bound up. that the binding may be neither too loose, nor too hard. § 9. The Ligature must be made of Linnen bands, and soft, that they may

cause

no pain : they must be equal that they may bind equally every where, and clean, that the humors issuing (if any be) may be known by their Colors. The breadth must be according to the part to be bound : for the thicker parts the broader bands : for the thinner the narrower : In the Thigh and Knee, they must be near 4 Inches broad : In the Legg, Shoulder, Arm and Hand, near three inches broad : and in the Fingers about an inch and half : they are divided by Galen into *inward bands*, to wit, such as bind the Joynt under the Plaisters ; and *outward bands*, as those which are put above the Plaisters. Hippocrates useth two *outward*, and two *inward bands* : but one may do where the Joynt is not easy to slip out. The length of the Band is various in respect of the Variety of the parts to be bound : upon the Arm, the length of the Bands must be a yard and half : for the Leggs they must be two yards long : for the Shoulders nine yards : for the Thighs, twelve yards : now that the Bands may hinder Inflammation, they must be wet in fower Wine and Oyl of Roses mixed together : or anointed with Hippocrates his Cataplasim or Cerate made of Oyl of Roses p. ij. mixed with Wax p. j. some allow not here of astringent Pouders, and the white of an Egg, because they either cool dry, and bind the Joynt too much, or to hinder the Ventilation of the humors falling down. The way and manner of binding must be as we have shewed in cap. 27. Of Fractures. § 10. The Deposition of the part is three fold,

First Alligation, as in a Luxation of the Shoulder or Arm, wherein the Arm is bound to the Thorax : Secondly, suspension, as when the Arm is hanged by a linnen Cloth put about the Neck : Thirdly, Collocation when we place the part affected in a certain situation or rest : as the Arm upon the Thorax, or in a Capsula : the Thigh or Legg in a Trunk or Case ; wherein you must note that the Collocation must be, 1. after the mean Figure of the part. 2. Soft that the Sick may lye at ease, therefore is the Case filled with huds. 3. Equal, and a little upwards, that the humors may not flow to the part affected and cause Inflammation. 4. At Rest, for which reason the Antient used to make a hole through the bed and blankets, that the Sick in voiding of their Excrements, might not be forced to move. § 11. Religation, This is of use, first where the part is bound too hard or too loose : Secondly, if there is Itching or pain. § 12. If the Ligature is bound too straight, a hard tumor arises in the extreame parts dislocated, if too loose, there is no tumor at all. If it be too straight you must loosen it the second day ; but if too loose, you must streighten it the third day. § 13. If there is itching or pain, the bands are to be loosned and fair water to be poured upon the part, not only to abate the Itching and discuss the watery humors, but also that the Ligaments may be corroborated : but unless the Ligature be ill made or the itching be troublesome, let the part remain as it was first bound up till the 7 day : if there be an Itching you must loosen it on the third

third or fourth day: § 14. On the seventh day which is the time that the Inflammation should be past; the Ligature must be let loose again, and Luke warm water poured on again (if it be too hot it may loosen the Ligaments;) but the bands are no more to be made wet, nor to be smeared with Cerat of Roses, by reason the Inflammation is over, but upon the Joynt you must apply an astringent and drying Medicament, as Empl. Catagmaticum, Diapalma, Barbaryum, which may be sofened with the Cerate of Roses, or Oyl of Myrtles and applyed. Or this: *R Comfrey roots* ℥ij. *Frankincense, Mastich, fine Bole, Sanguis Draconis, A.* ℥iv. *fine flower* ℥j. *Sheeps Suet* ℥iij. *Wax* q. s. mix and make a Plaster. Or this: *R Litharge, Wax, Rosin, A.* ℥iij. melt them together, then add Meal of Comfrey roots, of Beans, fine Bole, A. ℥ij. *Tragacanth* ℥ij. make all into a Plaster. These may be applied if there be no ill Symptoms at the first binding up: so also after the seventh day, at which time the Ligature must be made somewhat streighter than before; after this second binding, the part ought not to be loosed untill the end of the Cure. § 15. If the Dislocation be accompanied with an Inflammation, take heed of extending the part before it be removed: first anoint with this Emollient: *R Ung. de Althea Composita* ℥ij. *Hogs Lard* ℥iv. *Oyls of white Lillies, of Roses of Myrtles, A.* ℥j. make a Liniment: Then apply this Discutient: *R Cummin seeds, Fennel seeds, A.* ℥vj. *Colophony, Frankincense, Mastich, Pitch,*

A. ℥j. *Wax, Oyl of Dill, A.* q. s. mix and make a Plaster: but of this we shall speak more in the next Section,

III. Of a Dislocation with Inflammation and Pain.

§ 1. If Inflammation seizes the part, before the Bone is reduced, you ought not to try to restore the luxated Joynt, till the Pain and Inflammation are allayed, lest by the distention of the Nerves, a Convulsion, Gangreen or some other dangerous Symptoms should be excited. § 2. In this Case therefore the part is to be placed in a mean posture, which may be the least painful: and premising universalls, the Belly being kept loose with Clysters, you must lay on the part affected fat Wool, and continually pour on the part warm water mixed with Oyl of Roses: for the hot water will discuss the humors, loosen the parts and ease the Pain; and the Oyl will mitigate the Inflammation, hinder its encrease, and repercuss. § 3. When the Inflammation ceaseth, the humors will be somewhat thickned, for which cause like, we must gently chafe the part with our hand being first anointed with Oyl of Almonds; then lay on this Cataplasme. *R Ammoniacum* ℥ij. dissolved in Vinegar: *wax* ℥jss. *Hens grease* ℥j. *Saffron* ℥j. *Oyl of Roses* enough to make a Cataplasme: Or *Oxyroceum* mollified with Oyl of Roses. § 4. The Inflammation being overcome, let the part be extended, reduced, bound up and placed as it ought to be. § 5. If Inflammation succeed after it is reduced, by reason of the violent extension and perpetual

tual pain, a slender Diet must be ordered, and revulsive means used, as Purging, Vomiting, Clysters, &c. the Ligature must also be untied, though it fall out on the first or second day; and likewise luke warm water and Oyl of Roses must be poured on till the Sick finds some ease.

§ 6. *This done, the part must be bound somewhat loose and with fewer swaths, wet with Water and Oyl, which repeat every day till the Inflammation declines, which happens for the most part on the fifth day: then apply the afore described Cataplasim or Oxycroceum, to resolve the remainder of the Inflammation, with a Ligature more loose: When the Inflammation is gone, you must pursue the remaining part of the Cure, as if it were a simple Luxation.* § 7. *If after the Joynt is replaced, there is an Itching, the binding must be loosed, and the place sprinkled with warm water or some astringent Decoction, that the cause of the Itching may be difficult and the Itch abated: otherwise we must forbear warm water, lest the Ligaments should be relaxed.*

IV. Of a Dislocation with a Wound.

§ 1. *A Luxation joyned with a Wound is very dangerous, and if the Joynt be either uncovered or a little thrust forth without the skin it is Mortal; and the danger is greater if it be reduced than if it be not. If it be not reduced Inflammation will come upon it, Convulsion and sometimes Death: Or there will be a filthy and incurable Ulcer, which if by chance it*

be brought to Cicatrize at all, it will easily be dissolved by reason of its softness: If it be reduced there is extream danger of Convulsion, Gangreen and Death *Hippocrates de Art Lib. 4. Text 16. 17. saith, If they remain reduced they shall dye, and their Life shall be of very few days: for there are few of them which pass the seventh day, by reason of a Mortal Convulsion, moreover a Gangreen also does happen. These things we must know for certain will come to pass.* This Danger saith Sennertus lib. 5. par. 6. cap. 2. is so much the greater by how much the Member is greater, and the Nerves and Muscles about it are greater, and by how much the Wound is neerer the Joynt; for as much as because of distension of the Nerves and Muscles, Pains, Inflammations, Convulsions, Acute Feavers, Gangreens, and a Sphacelus may be caused. In a finger (in which there is the least of Danger) the Luxation ought not to be replaced when there is an Inflammation but either before it comes, or after it is allayed. But some fear these kinds of dangers only in the great Joynts, as the Wrist, Arm, Shoulder, Ankle, Knee, Thigh, by reason of their strong Tendons and great Ligaments and Vessels. § 2. *The Cure. If it may be reduced, it must be at first, before Inflammation; (but let the Patient and the By-standers know the eminent danger, that the Artist may save his Credit, and his Art be not disparaged if things should not succeed.) This saith Scultetus, The Chyrurgian must attempt the first,*

first, second, eighth or ninth day, that he may not appear to be Ignorant, first looking to the Inflammation and Convulsion, then to the Wound and Dislocation.

§ 3. If the Joynt be replaced, and an Inflammation or Convulsion should then happen, it must be thrust out of its place again (if it can be done without violence :) however you must endeavour to abate the Inflammation, and then the Cure of the Wound must be ordered as in a Fracture with a Wound: but the Member it self must be so placed that the Sick may lye in as much ease as is possible.

§ 4. When the Joynt cannot be reduced, care must be first taken for Universalls and Diet, and the part must be placed in a mean figure (without any extension or binding) either hanged from the Neck, or laid down in a Capsula, that it may feel as little pain as may be: Inflammations, Pain and Convulsions at hand ought to be hindred by such things as are anodyne, concoct, cool and repel.

V. Of a Dislocation with a Fracture.

§ 1. If the Fracture is neer the Joynt, consider whether the Joynt be whole or luxated, lest while you cure the Fracture only, you should neglect the Dislocation.

§ 2. If with the Luxation there be a Fracture, you must extend the common way, and the luxated Joynt must be reduced into its proper place, and then the broken bones be conformed and composd. § 3. Upon each you must apply fit Medicines, such as we have already shewd in the general

method of Fractures and Dislocations, after which the part ought to be conveniently bound up.

§ 4. But if the Joynt cannot be restored to its place without danger before the Fracture is cured, then you must first attempt to cure the Fracture; and afterwards when the Callous is generated, endeavour the reduction of the Luxated Joynt.

VI. Of a Dislocation reduced, with a Convulsion following it.

§ 1. If after the reduction of the Bones, a Convulsion should succeed, the Joynt must be presently loosd again; and for a long time very well wet with plenty of warm water mixed with Oyl of Roses.

§ 2. You must also give inwardly Sudorificks, and apply outwardly to the Soles of the Feet Bricks warmed and wrapt up in a Cloth, and to the sides Bags of Oats made very hot in boyling S.V. to provoke a powerful Sweat, that all the Joynts may grow hot and Sympathize together; and withal strengthen the Heart with the Powers or Quintessences of Mint, Oranges, Limons, Rosemary, Bawm, Angelica, and such like.

§ 3. The beginnings of the Nerves must be anointed, viz. the nape of the Neck and backbone, as also the Groins and Armpits with such Oyls and Balsams as are powerful against Convulsions, among which we commend the Balsam of Amber, Balsamum Nervinum Schroderi, Polychrestum Mynsichti, Apoplecticum Horstij, and Balsamum Sacrum, or the holy Balsam (so called) of Myrrh. See our Pharm. lib. 4. cap. 4. sect. 1. 5. 7. 27.

VII. Of a Dislocation with a Callous, or an old Luxation.

§ 1. If a Luxation (by reason of an Inflammation coming upon it, or of a Wound or Fracture joyned with it) cannot presently be reduced, it has oftentimes a Callous growing upon it; especially in those joynts, which are compassed about with much flesh, as the Elbow, Knee and Foot: now this Callous is either simply hard, or else hard as a stone. § 2. If it be simply hard, it is while it is young and new, for growing old, it becomes like a stone; and it is known also by the Tumor about the part; and by fit remedies præviously applyed; as also from the possibility of the Chyrurgians moving the joynts, though the patient cannot. § 3. A Callous of a stoney hardness is known, first by the dryness and slenderness of the joynt; secondly, from the immobility of the joynt, wherein neither patient nor Chyrurgian can stir it: thirdly, from the continual thinness and slenderness of the part: fourthly, from Medicines præviously applyed too cold, dry and astringent: fifthly, from the long continuance of the Callosity. § 4. If the callous be of a stoney hardness, it is incurable: but if it be a soft callous or not so hard, it is very possible. § 5. The Cure. You must empty the body of evil humors by due purging, and order a fit and sparing Diet: then foment the part with warm water, or with Water and Oyl, or with some emolient Decoction: after the fomentation anoint with Unguentum Dialtheæ, and apply upon it this Cataplasma. R. Al-

theæ roots, wild Cucumer, A. ʒiij. leaves of Mallows, Althea, A. M. j. water q. s. boyl and pulp them through a hair sieve; to which add meals of Fanagreek and Linseed, A. ʒss. Oyl of sweet Almonds, Hogs Lard, A. q. s. make a Cataplasma. If the hardness be greater, add to the things boyled, wild Cucumer root, and lay over Diachylon Magnum. § 6. When the part shall be sufficiently mollified, let it be chafed for near half an hour together with your hand, anointed with Oyl of Roses, and after the chafing, lay on Digestives, as the Cataplasma at Sect. 3. § 3. Or Oxycroceum mixed with Goose grease, Emplaster of Betony, and such like; Or, you may use the fume of Vinegar being cast upon a piece of Millstone, red fire hot; or a bituminous or sulphurous Bath. § 7. Lastly, when whatsoever was hard is mollified and discussed, the joynt in convenient manner, is to be reduced to its place, and then the rest of the cure to be performed as in a simple Dislocation.

VIII. Of a Dislocation reduced, and falling out again.

§ 1. It is caused, when after a violent dislocation, the joynt is ill set, and the Ligaments are not well dried: Or from some tumor which arises from Inflammation, being ill cured, so that the joynt cannot be contained in its place: Or from an humor running to the Joynt, which relaxes the Ligaments. § 2. If it proceeds from the first cause, you must use great dryers: If from the second cause, you must use Emollients and Discurients; of which, we have enumerated

rated many in other places. § 3. But if it proceeds from the third cause, it is more dangerous and difficult to be cured, and here you must first well purge the body, and order a proper and fitting dyet, which may strengthen the joynts, then you must make adustion, than which there is nothing better. For this cauterizing consumes all the moisture by a hard crust, which makes a hollow Ulcer; this being covered with a cicatrize, contracts the part relaxed; for cauterizing heats, dries and digests the humors. § 4. But to make the adustion, it is necessary to burn the place to which the bone falls; as if the shoulder falls under the Armpit, the burning must be made under the Armpit: if the head of the Thigh be out of joynt to the forepart, the forepart must be burned in many places. § 5. But here you must beware first, that you burn not the nervous part, Glandules, Ligament, Veins or Arteries, because the fire is an Enemy to them, and causes a wonderful Convulsion: secondly, that the burning be made with Iron Tools, which make no great Escars, being like to Olives with sharp points, and made very red hot: thirdly, that after the adustion you cause the joynt to rest for many days, for if it should slip out again, the affect would be incurable.

IX. Of the Dislocation of the Jaw-bone or Mandible.

§ 1. The Mandible or Jaw-bone has two processes in its binder part, on each side, the former of which drawn forwards, being broad and

thin, ends as it were in a point; but the latter is carried backwards, and makes a long and transverse head: the former is inserted into the Os jugula, but the latter is fixed to the second bosom ingraven in the Temple bone. § 2. The Jaw-bone (except in young Children) can scarcely be dislocated otherwise than forwards: the Dislocation is sometimes but in one side, and is easily restored; and sometimes in both, in which case it is difficult to reduce, very dangerous, and often mortal. § 3. If it be dislocated but in one side, it stands awry and is turned towards the hurt side, there is a prominency withal, the Teeth stand not directly under one another, nor can they be brought together, so that the mouth remains open. If it be dislocated in both sides, then does it fall forwards, the mouth stands open, both the Apophyses are prominent, the lower teeth stand farther out than the upper, and the temporal Muscles are distended. § 4. The Cause is for the most part from a too wide opening of the Mouth, sometimes from the laxity of the Ligaments; but not often from a debility of the Muscles, for from both processes of the lower jaw, arise nervous and most strong tendons, with which the Muscles are inwraped, which are called *Crotaphici* and *Masseteres*. § 5. The Cure where the jaw is luxated on both sides. Let the sick be placed on a low seat, and let one hold his head firmly, or let it be held against a wall, then draw the Jaw-bone first downwards, putting

ring both your thumbs, wrapt up in Linnen, into the mouth, and upon the grinders, the rest of the fingers laying hold of the jaw outwardly about the chin, try to reduce it, by a manner and motion contrary to that by which it is fallen forth, viz. backwards, and lastly upward. § 6. If it has been dislocated some few days, before it be reduced, you must use softning and relaxing Medicines; but when it is put into the joynt, you must apply whites of Eggs, and Oyl of Roses, to ease the pain, and apply cloths dipt in Oxycrate: at second dressing apply things which may agglutinate and strengthen the ligaments; as *R. fine bole, Sanguis Draconis, fine Flower, Mastich, Rosin, Pitch, A. ʒss. whites of Eggs enough to make a Cataplasma:* afterwards apply *Empl. Diacalciteos*, softned with Oyl of Roses, and other things, as occasion requires. § 7. The Cure where the Jaw is luxated but on one side. The way of reducing it is the same with the former, only this you must particularly observe, that the Jaw being drawn downwards, and forced backwards, must afterwards be thrust also to the opposite side, and at once thrust upwards. Reduction being made, apply *Hippocrates his Cerat of Wax p. j. and Oyl of Roses, p. ij.* to the heads of the Jaw and Temples; and if there was a strong extention, you must apply things to hinder Inflammation. At last a fit bandage must be made, beginning from the chin, and tending towards the crown of the head, which binding must

not be loosed before the third day; the sick all this while forbearing to talk, gaping or chewing of hard food.

X. Of the Dislocation of the Clavicle or Collar bone.

§ 1. The Clavicula is luxated either against the Sternum or breast Bone, or against the Acromium of the shoulder blade, viz. the top of the shoulder bone: yet both these kinds of Dislocations are very rare, by reason of the firm connexion of the Clavicula, with the aforesaid parts, chiefly where it is joyned to the Sternum; it can scarcely be depressed, for that it is as it were underpropt with the first rib; but it may be dislocated inwardly, outwardly, and sidewise. § 2. The luxation of this bone is not easily known, and *Parvus Lib. 16. Cap. 11.* saith that he has known many Chyrurgians who have mistaken a Luxation of the Clavicula for a Luxation of the top of the shoulder. But a Luxation of the Clavicula, is known by a swelling on the top of the shoulder, and a hollowness in the place from whence the Clavicula is split: there is also pain, inflammation and impotency to move and lift up the Arm, or to do other things, which are performed by the help of the shoulder. § 3. This bone as it is seldom luxated, so it is as seldom well set, but hangs forth more or less from the upper part; but unless it be restored the sick will fail in some motion of his Arm, nor can he move his hand, either to head or mouth. § 4. The cure must be according to the variety of the Luxation; let the

thick lye upon his back, with a stone
 or hard cushion under his shoulder;
 then extend the Arm, draw-
 ing it forwards or backwards (as
 the dislocation requires) that the
 shoulder and breast may bunch
 forth outwardly, then with the
 palm of your hand press the Cla-
 mella so raised into its proper
 place. § 5. This done, six medi-
 cines and many blisters must be
 laid on, and the part must be bound
 straightly, which few men can en-
 dure: Galen in his Comment up-
 on Hippocrates de Artic. Lib. 1.
 Text 62. saith, that he suffered
 a straight and strong a Ligation
 in the 35. year of his age) that
 he could perceive the motion of
 the Arteries under his throat.

XI. Of the Dislocation of the
 Vertebrae of the Neck.

§ 1. This unless it be speedily
 helped brings death; for the spinal
 marrow is immediately oppressed,
 at the very original thereof, and
 the Nerves thence arising suffer
 together therewith, principally
 those which serve for Respiration,
 whence comes sudden Inflam-
 mation, Quinsy, and defect of
 breathing. § 2. It is known by
 the Vertebrae being turned a little
 to the hinder or foreparts; the
 Neck is then wrested aside, the
 face looks black, and there is
 difficulty of speaking and
 breathing. § 3. The sick is to be
 set upon a little low stool, and his
 shoulders pressed downwards; then
 his head is to be lifted up with
 both hands, turning it to and
 fro, (yet with as little violence as
 may be) till it is reduced, which
 is known by the sudden ceasing
 of the pain, and the Patients free

moving his head and neck every
 way. § 4. After it is restored,
 the head must be inclined to the
 part opposite to the Luxation, and
 the Neck must be bound up a-
 bout the dearticulation of the
 shoulder, but not too straight,
 least it obstruct the passage of the
 breathing and swallowing.

XII. Of the Dislocation of the
 Spina Dorsi, or Back-bone.

§ 1. This dislocation may be made
 either inwards, outwards, or to
 the right or left sides. § 2. The
 dislocation is inwards, when there
 is a depressed cavity in the Spine;
 outward, when there is a bunch on
 the back: or to the right or left
 side, when they obliquely bunch out
 to this or that side. § 3. It is cau-
 sed either externally by falls, blows,
 too much stooping, &c. Or Inter-
 nally, of which hereafter. § 4.
 The Vertebrae cannot be thrust in,
 without a great deal of violence,
 because it cannot be without break-
 ing of the Ligaments, for that they
 will rather break than suffer so
 great extension: Such a Dislo-
 cation, Paræus Lib. 16. Cap. 15:
 saith, is mortal, because the
 spinal marrow is exceedingly
 violated by too straight com-
 pression, whence comes loss of
 sense in the members lying un-
 der. Yet Guil. Fabricius Cent. 5,
 Obs. 69. prescribes a cure by cut-
 ting, which the learned Senner-
 tus, Lib. 5. Part. 6. Cap. 6. does
 not approve of. If any thing be
 done, it must be while it is re-
 cent, and that by a plaster firmly
 sticking to the skin, by which
 the luxated Vertebrae must be
 drawn up. If the Luxation be
 outward, it is not so dangerous,

yet is seldom cured, or not without very great difficulty: because there is often a pressing or bruising of the Sinews, which can no more after receive the irradiation of the animal faculty.

§ 5. The cure is done by laying the patient on his belly, and by two men and two ligatures, one tyed under the Arm-pits, the other about the Hips, the Patient must be strongly stretched out, and the Vertebrae with the hands to be thrust in again. If so be that the strength of mens Arms be not of force, you must do it by the Engine or Instrument which we have described cap. 27 sect. 2. § 4. called Hippocrates his Table; the way and manner of doing which we have taught by example in the said cited place at § 6. the which you may imitate upon occasion.

XIII. Of the Dislocation of the Spina Dorſi from an Internal Cause; Or of a Crook't back.

§ 1. This Disease for the most part steals by degrees upon Infants, and is often times hereditary; as also upon those of full Stature who have the Kings Evil near the Spine, this I have twice seen. § 2. It is known because the Ribs grow little or nothing in breadth, but run outward before; the Chest loseth its natural Latitude and stands out with a point; but it is a defect known by Sight, and indeed needs no Signs. § 3. If the Vertebrae stand forth and make a bunch which we call a Hunch or Bunch back, it is called in Greek Cyphosis: if it be depressed, which we call a Saddle back, it is called Lordosis: but if it be Luxated to

the right or left side, which we call crookedness, it is called Scoliosis. § 4. The Cause is either from the natural Imbicility of the parts, principally of the nervous Ligaments, by which all the Vertebrae are bound each to other on their outsides, but not coming to the Spinal Marrow: which Ligaments are encompassed with a tough and glutinous humour for the freer motion of the Vertebrae: Or from cold, crude, gross and viscous humors mixed herewith; which by great defluxions and Catarrhs, begets a Tumor which distends the Nerves, proceeding forth of the holes of the Vertebrae, and also stretches the Ligaments by which they are bound together; by which means they draw together with them the Vertebrae either inwards or outwards, or to the right or left side, and so moving them out of their seats, do dislocate them: Or from a fluidness and softness of body (which is only in Children) being hurt by Nurses by their too straightly lacing them to make them slender, whereby the Breast, Sides and Inwards are disturbed in performing their natural actions. § 5. The Prognosticks. These bunches having their Original from an inward Cause are absolutely incurable, unless they be withstood at first with great Care and Industry: such as have them by kind from their Ancestors are never to be cured; only Infants and such as are young and growing are to be attempted. § 6. The Cure is most commonly by a kind of manual Operation, of which we have already spoken

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spoken cap. 19. sect. 2. *aforegoing.*
§ 7. But Sennertus, lib. 5. par. 6.
cap. 5. saith, That if there remains
any hope of recovery, you must ap-
ply to the part strengthning Pla-
sters, on which an Iron plate must
be laid, which by degrees may
force the *Vertebrae* into their place;
which Plate must be so long and
broad as to comprehend the
whole bunch, that it may press
it the stronger; and the Inside
of it ought to be lined with
Cotton closely bumbasted and
covered over with Linnen: this
Plate must be so sewed to some
bodies, that when it is put on, it
may comprehend the part affe-
cted: this thus ordered must be
tied with Strings, slack in some
places, but very straight about the
part affected, that it may com-
press the bunching *Vertebrae*.
Under these Bodies apply this
Emplaster: *R* Oyl lb iv. Red
Lead lbj. Vinegar lbs. boyl toge-
ther till they begin to look black;
then add white Vstriol in fine pou-
der ʒvj. Litharge ʒiv. Osteocolla
ʒij. fine Bole, Tacamahac, Black
Pitch, A. ʒij. powder of Comfry-
roots, Mastich, A. ʒj. mix by de-
grees and make an Emplaster,
but before this plaster be laid on
you will do well to mollify the
Tumor, by anointing it for some
days with this Unguent. *R* Oyls
of Whelps, of Earthworms, of Or-
rice, of white Lillies, A. ʒj. Mans
Grease, Ung. Agrippæ, Dialthææ,
A. ʒvj. mix and make an Oynt-
ment.

XIV. Of a Dislocation of the Ribs.

§ 1. The Ribs may by a great
roke or blow be dislocated, and fall
from the *Vertebrae*, wherein they

are articulated, and that either
inwards or inside ways. § 2. It
is known that it is slipped on one
side by a manifest inequallity which
makes hollownes here and bunch-
ing forth there: but it is a sign that
it is driven in, when there is on-
ly a depressed Cavity in the
place where it was fastned to the
Vertebrae: such Luxations cause
difficulty of breathing, pain in
bowing down or lifting up the
body, much resembling the pain
of a Pleurisy; and a rising or
puffing up of the Musculous
flesh about the Rib, by a mucous
and flatulent humor there gene-
rated. § 3. A Rib dislocated must
not remain long out of its place, lest
more grievous Symptoms should fol-
low, violent pain, Inflammation,
Gangreen and Death. § 4. If
the Rib be removed out of its *Ver-
tebrae* upwards, then hang the Pa-
tient by his Arms over a Door or
some high place, and with your
hand press it in. § 5. If it be dis-
located downwards, let the Sick
bend himself, laying his Hands up-
on his Knees, the Chirurgian in
the mean time moving the Rib
to and again, and pressing in the
bunch till the Rib is reduced to
its right place. § 6. If it be dis-
located inwards, lay a sticking Pla-
ster on it, and often pull it away
with violence, by which means it
is oftentimes restored: if this
succeeds not, the affect is mor-
tal. § 7. After reduction apply a
strengthning Emplaster, such as
that at Sect. 13. § 7. just before-
going.

XV. Of a Dislocation of the Os
Sacrum and Rump-bone.

§ 1. These Bones may be disloca-
ted

ed by a violent fall, or a great blow upon the Buttocks; and then the Sick cannot bring his Heel to his Buttocks, neither unless with much force, bend his Knee: He goes to Stool painfully; nor can he sit, unless upon a hollow Chair. § 2. The Cure will be in about 20 days after it is set, during which time the Patient must not go to Stool unless sitting upon a hollow seat, lest the Bone should fall out of its place again. § 3. To reduce these, you must put your fingers up into the Anus to the place affected, then strongly raise up the Bone, whilst with your other hand on the outside, at the same time you place them in their true places: lastly, strengthen the part with proper Plasters for this purpose.

XVI. Of the Dislocation of the Shoulder.

§ 1. The Os humeri or Adjutorium, viz. the great bone of the Arm is never dislocated backwards, seldom upwards or forwards; but for the most part downward. § 2. A perfect Luxation of the Shoulder is caused from a great fall, violent blow, vehement extension or extorsion of the Arm, or any other forcible Cause. § 3. It is known by a roundish hardness felt under the Armpit, and on the Top of the Shoulder a hollowness, the Arm is longer than the other, nor can the Sick bring his hand to his mouth: but if the Dislocation be upwards or forwards, these Signs are wanting. § 4. If the Bone be fallen into the forepart, it is easier to reduce than if it be fallen into the Armpit. An old Luxation is very hardly reduced, and if it be, it falls

forth again. When the Bone is reduced, if the parts adjacent be free from Inflammation, the Sick may presently use their Shoulder and Arm without any pain; but it is not Prudence to do it, lest it fall forth again, and this is true in all other Joynts.

§ 5. There are six several ways of reducing the Shoulder luxated into the Arm-pit, now principally used, but Authors reckon up many others, which for brevity we shall here omit: and of these which we here declare, the Artist may use sometimes one, sometimes another, as they are most ready and at hand, it not being safe to refer the reduction, in waiting for the more excellent way. § 6. The first way of reducing the Luxation of the Shoulder: Let a strong man hold the Patient fast about the hurt Shoulder, and let another draw the Arm downwards, then let another lift the upper part of the Arm into its Cavity, and the Bone will presently be reduced into its place. § 7. The second way of reducing the Luxation, which is by the Heel. Lay the Patient with his Back on the ground, and under the Arm pit put a ball of Leather or other soft matter of a middle size fitted to it; then the Artist (being set opposite to the Sick) must apply his right heel, if it be the right Shoulder, or the left Heel, if it be the left, upon the Ball put under the Arm pit, and with both Arms let him draw the Shoulder downwards; whilst with his Heel he forces the Shoulder at once to the fore part and upwards; Lastly, Let him

force

force back the head of the Shoulder into the Cavity of the Blade, towards which motion the Muscles themselves do very much help. Or thus, Let one man with a swath or Rein, draw the Shoulder upwards towards the head of the Patient, pressing with his foot the top of the Shoulder, while the Chyrurgian draws the Shoulder downwards, but let another man hold the opposite sound Arm; so will the Bone be reduced safely, and without any great Labour, because it is done by a way contrary to the falling forth of the Bone, and with extension, which is almost natural. § 8. *The Third way of reducing the Luxation.* Lay the Armpit of the Patient upon the Shoulder of a stronger and taller man than himself; draw the dislocated Arm downwards, so that he lifting up his own Shoulder, the Sick may remain in a pendulous posture. In the Interim, press the Shoulder downwards, working the Arm to and fro, till it be restored to its due place; if the Sick be light, let a Boy or some other person hang at his Back, that upon the Extension, his Body may not follow. § 9. *The fourth way of reducing the Luxation by the Reductive Ladder.* The form of the Instrument and manner of doing it, we have already taught in cap. 27. sect. 2. § 10. *foregoing.* At the bottom of the Ladder, a Stool is placed for the Sick to stand upon; and upon the uppermost round the Armpit is put, and the luxated Arm is drawn downwards, in the Interim the

Shoulder is moved up and down, and the sound Arm is strongly drawn downwards at the same time by a Servant on the opposite side, and the Stool also taken from under his feet, so by means of the Patients thus hanging on the Ladder, the Shoulder bone becomes reduced. § 10. *The fifth way of reducing the Luxation by the help of Hippocrates his Ambli.* The Description of the Instrument, and the Use thereof, we have exhibited in cap. 27, sect. 2. § 7. and 8. foregoing, to which we refer you. § 11. *The sixth way of reducing the Luxation is by the Pulley of Vitruvius.* The Instrument we have described in the place aforementioned at § 3. and its use is thus; let a strong lusty fellow hold the Sick fast about the luxated Shoulder; and another by a swath or Rein lift up strongly the *Os humeri*, whilst a third extends the Arm, by means of the Pulley fastned into a wooden Post or Pillar at one end, and tyed to the Arm with Swaths, above the Elbow, at the other. § 12. *If the Shoulder be luxated to the forepart it is reduced almost the same ways by which the former was done, viz. by extending the Shoulder, and drawing its head up and down, thereby forcing it into its Cavity:* but herein the Shoulder being drawn downwards must be driven to the hinder part, the Artist also ought to be ware that in the Action, the Bone falls not into the Arm-pit; which may be prevented by putting a Ball there, and making a Servant with a strong and broad

swath, to draw the Bone forcibly upwards. § 13. *The Bone being reduced, you must apply things which hinder Inflammation, and strengthen the relaxed and soft Ligaments, of which we have spoken before, in the general Cure both of Fractures and Dislocations, and elsewhere.* § 14. *In swathing you must have a Ball made up of Linnen or coarse Flax, and dipt in proper Medicines to be put under the Arm-pit, that the Head of the Shoulder return not thither, then let the first swath be here, afterwards let it be rouled once or twice about the Joynt; hence let it be brought to the Shoulder blade, and again descend to the Joynt: at last that it may draw the Arm the more upwards and keep it so, let it tend to the Neck on the other side, and there be bound, not loosening of it till the third or fourth day, unless an Inflammation force it. But the swath being taken off, or laid on, let Diapalma be applied, if in Summer; Or Barbarum or Oxycroceum, if in Winter.*

XVII. Of the Dislocation of the Elbow and Radius.

§ 1. *The Cubit may be dislocated forward or backward, inward or outward, and that sometimes alone, and sometimes the Radius is dislocated with it, which by handling the part is easily perceived.* § 2. *The Cubit is joyned to the lower end of the Os humeri by Gynglimus, viz. by that kind of Articulation in which the Bones joyned do mutually receive, and are received of one another; for the Adjutorium has in its lower part two Bosoms, the former or less*

fer whereof receives the outward process of the Elbow, but the hindermost or greater, the hinder process of the same; and for the receiving of the Radius the Os humeri has also a peculiar head, which is the outward head. § 3. *The Luxation is caused mostly from a violent and sudden extension of the Arm, or other vehement force, as bending it unnaturally, &c.* § 4. *It is known by sight and touch; for if the Cubitus be out forwards, the Arm thereby becomes shorter, and cannot be bent, the Bone stands out forwards, and behind there is a præternatural hollownes. If it be dislocated backwards, the Arm will then also be shorter, and cannot be bent; the Bone will stand out behind, and forwards there will be an unnatural Cavity: If it be inwards or outwards there will be the like Signs, only the Tumor will be in the place to which the Bone is forced, and the hollownes in the opposite place.* § 5. *The Dislocated Bone or Bones must be speedily restored, otherwise there will follow great pains, Inflammations, acute Feaver, vomiting of Choller, and sometimes Convulsions, and Death it self. The Elbow as it does not easily fall forth, by reason of its firm and fast Coarticulation with the Os humeri, and its plenty and strength of Ligaments; so being once Luxated, it is difficultly restored.* § 6. *The Cubit dislocated forwards must be extended Obliquely, and so far that one Bone may not hurt the other in setting. If the hands be not strong enough then bend the luxated*

Arm

Arm about some Pillar, or some steadfast Post, and by the help of Swaths or Bandage extend it, pressing the Bone backwards till it is reduced. § 7. The Dislocation backwards, inwards or outwards, may all of them be easily reduced by a proper extension, if they are not become inveterate.

§ 8. The same manner of Reduction is used in replacing the Radius if it has followed the Luxation of the Elbow; but if it be only departed from it, it must be pressed close with the prominent parts of the hands, the Arm being positioned in its natural figure: after reduction proper Medicines must be applied with good Bandage, as we have oftentimes before advised. § 9. Lastly, It is to be noted, That a Luxation of the Elbow is either perfect or imperfect: it is perfect when one or both the Bones are perfectly out: It is imperfect, called a Subluxation when the Bone or Bones are only thrust aside, and this is for the most part by reason of a flux of humors falling down upon the part, where, by their long stay being concreted and hardened, they by degrees put the Bone or Bones out of their places.

XVIII. Of a Dislocation of the Carpus or Wrist; Metacarpium or After-wrist and fingers.

§ 1. The Wrist is joyned to the Elbow bone and Radius by Diarthrosis, or a manifest motion, by articulation: but the After-wrist by a Synarthrosis or doubtful Articulation, where there is no manifest motion: and the said Metacarpium is joyned again by Diarthrosis with the Bones of the fin-

gers: And after this manner also the Bones of the fingers are joyned one to another. § 2. The Differences. The Wrist and Bones of the Fingers may be Luxated all four ways, viz. inwardly, outwardly, and to either side: The two middle bones of the Metacarpium only inwardly and outwardly: the two outward Bones, inwardly, outwardly, and to one side. § 3. The Cause is some violent motion, blow, fall, perversion, contorsion or extension. § 4. The Signs are common with other Luxations; in the place to which the Bone is slipt a Tumor appears with a hollowness in the place from whence it is fallen; The Member cannot be bent, nor the fingers extended, by reason of the compression of the Nerves and Tendons going to them. § 5. These Luxations are not dangerous, for as much as they are in parts remote, and may easily be reduced. § 6. The Bones of the Wrist into what part sever they are luxated, may be restored with very little or no extension, thus: let the Luxated hand be placed upon a board or table, with the Palm downwards, if the Luxation be to the outward parts; but with the back downwards if it be to the inward parts; then let the Artift very strongly force the luxated Joynt to the contrary part, either with the Palm of his hand in soft and tender bodies, or with his heel in those which are stronger, so will the Bones be reduced: if the Luxation is to either side you must only thrust the Luxated bones to the contrary part. § 7. After the same manner joyn

must reduce the Bones of the Metacarpium. § 8. To reduce the fingers, you must lay them straight upon a Table and press them down, so the Bone will go into the Joynt, by reason their Sockets are not deep, the Articulation short, and the Ligaments not so strong as others: but Sennertius, lib. 5. par. 6. cap. 8. thinks good of a light extension. § 9. This done, Medicines hindring Inflammation and strengthening the Joynts ought to be applied with convenient bandage. These Luxations are cured in about 12 days.

XIX. Of the Dislocation of the Hip or Thigh bone.

§ 1. The Thigh Bone is most exactly half joyned by Enarthrosis to the Bosom of the Hip, fully large and deep enough to receive its head and is very strongly united to it by a most firm Ligament, arising from the bottom of the Hip, which is implanted into the narrow Bosom of the head of the Thigh, that thereby it might be the more safely, readily, and easily extended, turned or moved any way, and not easily slip forth. § 2. The Luxation of the Hip or Thigh bone is either perfect or Imperfect. § 3. A perfect Luxation is caused from External violence, as vehement Extension, great falls, blows, distortion, &c. § 4. An Imperfect Luxation or a subluxation, is caused from humors flowing down to the part, where, thickning and concreting, they by degrees thrust the Bone out of its place: this has been often seen in a vehement and inveterate Sciatica. § 5. The Differences are drawn from the several ways by which the

Luxation may be made, viz. Inwards and outwards often, and forwards sometimes; but very seldom backwards. § 6. The signs of a Dislocation inwards. The Leg is longer, and moves with difficulty; the Knee is turned outwards; and the head of the Thigh bone, may (by the hands) be felt in the Groin. § 7. The signs of a Dislocation outwards. The Leg grows shorter, and the foot is turned inwards; the Sick can then indeed bend his Leg, but scarcely bring it to the ground.

§ 8. The Signs of a Dislocation forwards. The Groin is swelled, the Buttocks fallen, the Leg is neither shorter nor longer, nor can be bent but with trouble, The Urine is suppressed, nor can the toes of the Foot be easily extended or turned to the Ground, and the Patient is forced to tread only on the heel.

§ 9. The signs of a Dislocation backwards. The Sick can then neither stretch out nor bend his Leg; nor is he able to bring his heel to the Ground, which if he should force himself to do, he would fall backward; the Leg is shorter, there is a hollowness in the Groins; and if the Buttocks be pressed upwards, you will find an unusual swelling. § 10. Toe Prognosticks. These kinds of Luxations are never without danger, because they are hardly reduced; and being reduced are in danger of falling out again: An old Luxation of the Thigh bone, which has already contracted a Callous, and whose Bosom is filled up with humors is judged incurable; and although in this case the Bone be

bereduced, yet it stiaies not in its place, but falls out again: the same comes to pass if that the Ligament in the Cavity be preternaturally extended or broken. §11. If the Luxation be not reduced, the adjacent parts waist and consume by Degrees, because the Veins and Arteries are so straightned and compressed that there is not free passage for the Blood, Vital and Animal Spirits. §12. The Luxation inward is difficult to reduce, and as easily slips out again, whereby the part affected is wasted, and the sick lamed: if it be not reduced, when they go, they wheel about their Thigh outwardly, because it is too long, and they cannot well bend it, so that they are forced to wheel it about. §13. The Luxation outward, if it be not set aright, yet the pain vanishes of it self, and the Sick is in time able to go without Crutches. §14. The Luxation forwards also, although it be not rightly set, yet the Sick will be able in time to go well enough upon it, though oftentimes it is so that he is forced to trail his Leg after him. But Senner-tus, lib. 5. par. 6. cap. 9. saith, that although it be not reduced, yet the Sick will go forthwith upright without a Staff, and wholly upright; for by reason of the inflexibility of the Groin, they use the whole Thigh more straight in going than when it was found. §15. The Luxation backwards though it be not reduced, yet the pain will in time vanish, and then the Leg may be bent again, but it remains shorter and straight, the Foot being

turned neither inward nor outward. §16. The way of reducing the Luxation. It is almost the same with that of reducing the Shoulder, and truly the Extension may be common to all the Species of a Luxated Thigh, but the manner of forcing and restoring the head of the Thigh bone, must be according to the variety of the place into which it is fallen. Therefore lay the Patient down upon a Table on his back or whole side for the three first Species; but on his Belly if the Luxation be backward; then between the Legs put a strong Staff, wound about with Linnen, which with Ropes, Reins or such such like, let be drawn strongly upwards by one or two men; or you may do it by swaths or bandages alone; in the mean season let another draw out strongly his Leg; and while the Extension is making and made, let the Chyrurgian with his hands put the head of the Bone into its place; thrusting that outwards which is fallen inwards and contrariwise, and that backwards which is fallen forwards, and on the contrary. §17. If it cannot be reduced by the former means you must be forced to make use of Engines or Instruments, as the Pulley of Vitruvius, the Table of Hippocrates, the Glossocomium of Galen, or the Reductive Ladder; all which Instruments together with their several uses, we have at large described and delivered in cap. 27. sect. 2. § 3. 4. 5. 6. 9. and 10. aforegoing, to which place I shall now refer you §18. The Bone being reduced, you must apply proper Medicines, with fit bandage and

and convenient situation, as we have largely taught in the preceding Chapter of Fractures: and both Thighs must be bound, that the luxated Bone may be kept in its place, which must not be loosed before the fourth day.

XX. Of the Dislocation of the Patella, or Knee-pan.

§ 1. The Patella may be luxated to the upper, lower, outward and inward part; but never to the hinder part, because the Bones of the greater trochle and Thigh, which it covers, do hinder it.

§ 2. It may be caused either by a fall from an high place, great blows, jumping, or violent distension.

§ 3. It is known both by sight and touch; nor can the Knee be easily bent as it should be.

§ 4. In reducing of it let the sick stand upright, and press it in again: lay on the side where it has been forced away, a hollow splint, answerable in form to the Knee pan; and below in the Cavity of the Legg put one or more compressing splints, binding the whole Legg so stiff, that the Knee may not bend.

§ 5. At last, when you think the danger of its falling out again is past, let the Patient by degrees accustom himself to bend the Joint.

XXI. Of the Dislocation of the Knee.

§ 1. The Knee is subject both to a perfect Luxation, and to a Subluxation: the perfect Luxation may be either inwards, outwards, which are often seen; Or backwards, which is seldom: Or forwards, which is very rare, in regard that the Patella does hin-

der it. § 2. It may be caused from falls, blows, jumping, hard running, vehement extension, contraction, or distortion of the Legg.

§ 3. It is known, by a bunching out of the side to which the Bone is fallen, and a hollowness in the place from whence it is fallen, all which

you may discover both by sight and touch; the figure is depraved, and the Thigh is extended and cannot be bent.

§ 4. If it be compared with the Elbow, the Knee osener falls out, and is more easily reduced; it is also less dangerous, nor does an Inflammation easily happen, because the reduction is without any great force.

§ 5. The Luxation either inward or outward is easy to be restored by moderate extension, either with hands in a new Luxation, and in a Childs body: Or with Swaths or Reins, in a Luxation not so late, and in a stronger Body: forcing the Bones with the Hand, into the part from which they fell.

§ 6. A Luxation backwards is restored by placing the sick to lean over a Bench, and putting a linnen Ball into the hollow of the Ham, where the Bone sticks forth, and then strongly forcing the Bone forward; whilst another takes hold of the lame Legg, and on a sudden so bends it, as to make the Heel touch the Buttocks.

§ 7. A subluxation is cured by a very little extension, and forcing the Bone to the contrary part.

XXII. Of the Divulsion of the Fibula from the Tibia, or Shin-bone.

§ 1. These Bones adhere close one to another both at the Knee and at the Ankle, but the Fibula may

may be drawn from the Shin-bone three ways, viz. to the fore part, and on both sides. § 2. It may proceed from the same Causes, from whence a Luxation of the Knee and Ankle may come: especially if by walking in a slippery place, the foot should be wrinched either inwardly or outwardly. § 3. The Cure is not difficult; for it may easily be brought back to its place, by forcing it to the contrary part with ones hands; after which convenient Emplaisters, Bolsters, Ligature and plating must be ordered, and rest for some Weeks, till the Ligaments are confirmed.

XXIII. Of the Dislocation of the Talus or Ankle bone.

§ 1. The Ankle is joyned with the greater and lesser focile by Gynglymus, and may be luxated both perfectly, and imperfectly to every part: viz. to the outward, inward, fore and back parts. § 2. It is caused commonly either by violent extension, great blows or falls, or by distortion and wringing of the Foot. § 3. If it be luxated outwardly, the lower part of the Foot is turned inwardly; if to the inward parts contrarily: if it be luxated to the forepart, the broad Tendon lying under the Heel is hard and stretcht, and the Foot is lesser and shorter: but if to the hinder part, on the contrary, the Heel is almost hid: the Soal of the Foot seems to become greater, and the Foot longer. § 4. The Ankle is both easily luxated, and easily reduced; but because of the multitude of the Bones which goe to

the constitution of the Joynt, it is with great difficulty confirmed.

§ 5. Let the part be complearely extended, either by mens hands, one man holding the Legg, another the Foot: Or with Reins or Swaths: Or with Engines, such as we have formerly described and explained: then let the Artist force the Joynt to the contrary part, from whence it is fallen; and after apply convenient medicines and bandage. § 6. In this Luxation the sick must keep his bed the longer, that the distended Muscles and Ligaments, which are now made more loose, may acquire their pristine strength, and be made fit to bear the Body, which will scarcely be before the fortieth day is expired.

XXIV. Of the Dislocation of the Heel.

§ 1. The Heel lying under the Ankle is often dislocated more forward and backward, but seldom to the sides. § 2. The Heel is for the most part luxated from the Ankle by leaping from an high place, the party falling upon the Heel: sometimes also it has been dislocated in dancing. § 3. It is known by the great pain, depraved figure of the part, and hurt of the Action. § 4. It is a very dangerous luxation, because the Veins, Arteries, and greater Nerves which it receives, and also the Tendon conjoyned with it, are easily drawn into consent, whence Ravings, Tremblings, Convulsions, Swooning, and acute Feavers are excited. § 5. It is reduced into its pristine state by a light extension: when it is reduced, it must be so bonnd

up

up, that the humors abounding may be driven from it to other parts; and the Sick must so long rest himself, till the Joynt is well confirmed.

XXV. Of the Dislocation of the Tarsus, Metatarsus, and Toes.

§ 1. These may be so many ways dislocated as may the Bones of the Hands: and as easily reduced as they. § 2. If the Bones of the instep stand upwards, the sick must tread hard upon a plain place, and the Artist with his hand must thrust them into their places: if they stand outwards to the Sole of the Foot, you must then press them upwards, and restore each Bone to its place: the same you must do if they be luxated sideways. § 3. The Luxation of the Toes are restored altogether by the same ways and means as are the slips of the Fingers: but with this note, that when any thing is dislocated in the Foot, the Sick is necessitated to keep his Bed for at least twenty days, in which time it may be confirmed.

XXVI. A summary of Chyrurgick Operations, represented in the general Figure at Table XII.

A. Galens Ring or band to bind up the Lips, chiefly the under Lip.

B. An Instrument in wrist Wounds

and Arteries being cut.

C. An Instrument to extend a contracted Knee.

D. Another like to extend the Arm.

E. An Instrument to open a Fistula in the Thigh.

F. The place for cutting Issues in the Arm.

G. An Actual Caутry to make issues with.

H. A Ligature for issues in the Arm.

I. The place for issues in the Thigh.

K. The place for issues against a Hip Gout.

L. Ligature for Thigh and Calf issues.

M. An Instrument to draw out Bullets which lye deep.

N. The way of using that Instrument.

O. The way of cutting varices.

P. A deep Wound in the Thigh by a Dart.

Q. The Tent to keep it open in the depending part.

R. The way to cleanse the shin bone with a Rasp.

S. with the Figures 1, 2, 3, 4, &c. is a Ligature for the shoulder blade, breast, back, sides.

T. The way of opening the head and skull.

V. The application of the Seton in the Neck.

C H A P. XXIX.

Of Diseases of the upper Ventricle.

I. Κεφαλαλγία, *Capitis dolor, Cephalalgia, Soda, the Headach.*

§ 1. The Indications of Cure are twofold, first, the easing of pain either by Anodyns or Narcoticks: Secondly, the removal of the Cause, and strengthening the part. § 2. Those things which ease the pain by an Anodyn property, are Oyl of Roses and Vinegar: Oyl of Nutmegs by expression: The Powers or Quintessences of Caraways, or Juniper-berries, Crawfish beaten well with Rose Vinegar, Vervain-Water, and its Root, and imposed on the part; the Alabastrine Unguent, Quintessences of Limons, Oranges and Rosemary, The Power of Amber, &c. all outwardly used; to which add *Oleum Piperis*, or the Tincture thereof, *Balsamum Stomachicum Regium, Balsamum Apoplecticum Mynsichti*, and our Quintessence of Virtues: But the Oyl, Balsam, and Quintessence or Powers of Amber are inferior to no other thing whatsoever. It will be good to shave the Head and apply some of the aforesaid things; after anointing strew on the Pouder *Diansum* and bind the Head up: the Herb Vervain green or dry, is a specifick in this Case. § 3. If Anodyns will not do you must come to the use

of Narcoticks, and anoint the Temples with our *Oleum Anodynum*, or *Unguentum Populeum*: Or apply Cloths moistned in Wine in which Opium has been dissolved; Or, you may bath with Anodyn Extract of Opium (see Our Pharmacopœa.) Or with Our Liquor *Vitæ Anodynus*: Or with Water *℥ij*, mixed with Oyl of Vitriol *℥j*. Or with *Laudanum* *℥i* dissolved in *℥ij* of Spirit of Wine. § 4. If none of the aforesaid things do any good, you must use Epispasticks: more especially if extremities force: *Reverius* saith, *lib. i. cap. 16.* that a Vesicatory applyed over all the Head after it is shaved will cure it. § 5. The cause remains now to removed, without which the pain will return again. First, purge by the Nostrils with these solid Errhines, *R. Confectio Hamech* *℥ss.* *Guttæ Gambæ*, *Scammony*, *Grains of Paradise*, *A. ℥iij.* mix. and make long roulsto put up the Nostrils: these may be used a little before going to Bed, every other night for seven or eight times. Then purge twice a week with *Pilulæ Rudij, ex duobus, Aggregativæ, Alephanginæ, auræ.* or *Cochiæ minores*: or with the Cathartick Tincture of Cloffew, or *Tinctura Catholica Grulingij*, or Flowers of Antimony, or *Vinum Benedicum*.

But above all we commend the *Pilule Lunares* (see our *Pharmacopœia lib.2.cap.2. sect.18.*) given to gr. ij or iij at a time, twice a week, as a Medicine which transcends all others. § 6. *Observations*; several have been cured by applying the half of a hot wheaten Loaf, moistned with the Quintessence of Rosemary: binding it on as hot as it could be endured, and repeating it twice or thrice. Great Headachs have been cured by making an Issue on the back of the Hand, or between the Thumb and Fore-finger. Others have been cured by applying ten or twelve horse-leeches round about the Temples, by which the matter of the Disease has been drawn forth. See *Zacutus Praxii lib.1. obs. 7, 8.* Extream violent Headachs have been cured by applying a Caute-ry upon the Coronal Suture: but *Poterius* in his *Observ. cap.8. Cent.3.* saith, That it is more powerful being applied to the Temples.

II. *Κεφαλαία, Cephalæa*, an old Invererate Headach.

§ 1. The Indications of Cure here are the same with the former, and the same things may indifferently be used with respect to the Constitution. § 2. The cause you are to consider, whether it proceeds from a hot or cold distemper: if from a hot, it may be Blood or Choller, and the same Medicine is proper for both, but only it ought to be stronger or weaker according to the strength of the Disease: in this case first exhibit a Clyster; then give a proper Cholagogue, which repeat two, three or more times

as you see occasion. If it proceeds from a cold cause, use the aforementioned Errhines, especially if the Headach be internal: but if it be external, apply a Veficatory to the nape of the Neck. § 3. The pain being removed, let the head be strengthened by taking the Powers of Quintessence of Rosemary, Cloves, Limons or Oranges twenty drops at a time every morning in a glass of Sack; and once a week a Dose of *Pilule Lunares*: outwardly anoint with our *Confectio Anodyna*. § 4. *Observations.* *Botallus* saith, that desperate old Headaks have been cured by opening the Arteries, which have been done without any kind of danger. To the Orifice of the opened Artery, you may apply *Pulvis Astringens* with the White of an Egg, binding it up as a Wound of the Head. Some have been cured by applying *Emplastrum de Ray* with double Mercury to the place afflicted: Others have been cured by applying *Unguentum Mirabile*. And one I cured after all things failed by Sweating with *Confectio Anodyna* inwardly given, after the raking of an Emetick, viz. *Vinum Benedictum*.

III. *Ἡμιεγκρία, Hemicrania*, The Megrim.

§ 1. The Indications of Cure are altogether the same with a Cephalalgia, and the same Medicaments may be used here; but these things following are in special to be noted. § 2. If it proceeds from a distemper arising from Blood: you must give inwardly spirit of *Sal Armoniack*, gut. xij. at a time in a glass of Sack, and make the sick smell

smell often to the Powers or Quintessence of Limons, Oranges, or Rosemary; anointing the place pained with Quintessence of Amber. § 3. If it proceeds from a distemper of Choler, Our Confessio Anodyna, or Laudanum Paracelsi mixt with Rose water, are excellent, applying a Vescicatory to the Neck: so also a Decoct. of Agarick and flowers of Camomil to wash with. § 3. If from a distemper of flegm give Oxymel of Squils; Waters of Elder Flowers, Quintessence of Pennyroyal and Rosimary in Poppywater: Sal prunellæ dissolved in Vervain water: Oyl of Nutmegs expressed, Balsamum Apoplecticum Mysichti. § 5. If it proceeds from a distemper of the Stomach, give these Pills of Fernelius. R fine Aloes ʒi. Species Elethuarij de Gemmis, Diatrion Santalon, of red Roses, A. gr. vj. with Syrup of Wormwood and Violets make a Mals: give ʒi every other night, two hours before Supper: and to the Head lay this Epithem. R Green Roots of Wild Cucumer, Vervein, Wormwood, A. Mj. boyl in Oyl and Water to a Pultise. Or make a Cataplasim of Goats dung and Vinegar, and apply it warm: Or mix Euphorbium ʒi. with Oyl Olive ʒi. and drop one drop into the Ear. § 6. Observations. Three men were cured, one after another by applying to the contrary side, Euphorbium dissolved in Vinegar. Pareus lib. 16. cap 4. saith, That a desperate Headach was cured by opening the Arteries of the Temples; where, being opened as a Vein, six ounces of Blood was taken away. A Coun-

try man was cured by applying a Cataplasim of Gourds, Hou-sleek, and pickled Herring to the Feet, giving every day cooling and emollient Clysters.

IV. *Σπορδινος*, Vertigo, Giddiness of the Head.

§ 1. The Intentions of Cure are three fold, first by discussion, by anointing the Nostrials with Oyl of Sweet Marjoram or of Nutmegs; or applying them with Rose water and Rose Vinegar, and washing the Wrists therewith, mixt with two drops of Oyl of Cinnamon; or besmearing them with juyce of black beet: Secondly, by Revulsion, if it proceed from the Inferiour parts: Here Vinum Benedictum Flores Antimonij; or Antimony mixed with other Purgations; as also Extract of black Hellebor, &c. are very good: to the Nostrials apply Errhines, Sternutatories, and Gargarisms: make derivation with sharp Clysters, Frictions, opening the Hæmorrhoides, Cupping Glasses dry and with Scarification, Vescicatories and Cauteries: Thirdly by Diet, wherein Meats and Drink which generates Vapours, are to be avoided. § 2. If it proceeds from evident causes, as turning round, &c. give the Patient a peice of bread dipt in sower Wine; or Salt of Pearl gr. x. in Poppy water, and let him repose himself to rest and sleep. § 3. If it comes from streightness of the passages of the Brain: let the sick often smell to the Spirit of Sal Armoniack; and anoint the Nostrials with Quintessence of Amber. § 4. If it proceeds from a Windy Va-

Vapor, you must first make Evacuation by § 1. by Discussion, Revulsion, Derivation, Errhins, &c. Secondly, strengthen the Brain by Specificks, among which are Peacocks dung given to ʒi in Wine: or *Pulvis ad Vertiginem Cratonis*: A Diet of Guajacum, Antepileptick Waters, Oyls and Balsams, to anoint the Nostrils with, Oyl of Amber, Poulder of Cinnamon, Roots of Doronicum, Extract of Scorzonera, fat of Land Snakes: *Laudanum* gr. iij, dissolved in Sack, poulder of Silk-worms dried and strewed on the Crown of the Head: Quintessence of Rosmary; Electuary of Saxony, *Elixir Proprietatis*, Oyl of Caraways given with Poulder of native Cinna-bar, &c. § 5. If it proceeds from Wind, you must rectify and strengthen the Stomach: give after Meals gr. iij or iv of Frankincense: Species *Diamoschu Dulcis* to ʒj. old Conserve of Red Roses, *Diacydonium simplex*, Spirit of Vitriol, Syrup of Quinces, &c. § 6. But if it arises from the Liver, Spleen, Womb, &c. you must have respect to the Symptoms and affects of those parts. § 7. An Observation out of *Zacutus Lusitanus*, lib. 1. obs. 38. A man so much troubled with a Vertigo, as that an Apoplexy was feared; was cured by a Cautery in the fore part of the Head, letting it run long; after that general evacuations, Issues in many parts, and a Seton in the Neck, were all applied in Vain.

V. *Phrevins*, *Phrenitis*, The Phrensy.

§ 1. The Intentions of Curing

are first, to abate the delirium by revulsion and repellers: secondly To cause rest and take away the incessant Watchings: thirdly, to help the suppression of the Urine. § 2. For the first you may provoke bleeding at Nose by putting a Feather up, made like a star, and forcibly turning it about, and you ought to draw away the Blood in a plentiful manner: if Blood will not come, use Cupping Glass with or without Scarrification to the Shoulders, Arms, or Thighs: Or apply a Caustick to the Leggs: Or Veficatories to the nape of the Neck: but purge not, unless it be a primary Phrensy, viz. such as comes not from any other Disease: if it comes upon a continual Fever, give Infusion or Tincture of Sena or Rhubarb; as also Cassia, Tamarinds, *Catholicon*, Syrup of Roses, or any purge of cold things. For Repellers you may lay Narcoticks to the Forehead: Or Oyl of Roses mixt with *Unguentum Populeum*, Juycce of Lettice, Purslane, Nightshade, Housleek, and Whites of Eggs, Ana, beaten together and laid on with Hurds, to the Forehead, Temples, Crown, and nape of the Neck. Give an Emollient Clyster of cold and moist things every day, but without Oyl. § 3. To cause rest and take away watchings, exhibit *Laudanum Paracelsi* a gr. ij ad iij, iv or v. dissolved in a little Sack, but give it cautiously, lest the Phrensy should degenerate into a Lethargy: Salt of Pearl also may be given gr. x. at a time in Poppy water: you may cool the whole Body with cooling Juleps made

made of Syrops of Violets, Lettice, or Purslane, mixt with Poppy-water and Syrup of Limons or Pomgranates, and a little *Sal prunellæ* dissolved therein, or in stead of the Syrup of Limons you may sharpen it with Oyls of Sulphur or Vitriol. Let the Feet be washed with a warm Decoction, or Juyces of Willow leaves, Lettice, Purslane, Nightshade, and Poppy heads, for so sleep will be provoked. The same is done by applying Hou-sleek, Pompions or Gourds beat into a Cataplasim to the Soles of the Feet, or the Forehead: but as soon as he begins to sleep take it away, least it brings a Coma. § 4. To help the suppression of Urine, (which happens by reason of the Patients neglect;) you must often call upon the Sick to make water; and foment the region of the Bladder with warm water: Or, foment the Pubes with Oyls of Pismires or Scorpions: Inwardly give *Sal Prunella* dissolved in Saxifrage Water; *Sal Tartari*; Infusion of the Nephritic Wood, Syrup of Parietary, or the Vulnerary Spirit of Vitriol in Wine. § 5. If it comes from the stoppage of the Courses or the Hemorrhoides they must be provoked as we teach in their proper places. § 6. Observations. Zacutus saith, He cured a most desperate Phrenzy, by a Cupping Glass with Scarification, applied to the forepart of the Head, I suppose near the Crown: This, *Americus* saith, will do when all other things fail. I once cured a women forty years of Age, with this Epithem of *Pengostus*,

R^x Musk, Camphir, A, ℞. Damask Rose water ℥xx. in which Volatile Sal Armoniac ℥ij. was dissolved: mix them; the Head was shaved, and it was applyed warm with double Cloths to all the Sutures of the Head, and repeated when dry for twenty four hours. Some have been cured by giving *Argentum Potabile*, gut. vj. at a time in Sack, than which nothing is said to be more excellent; Others have been cured with Flowers of Antimony mixed with cooling purges, and sometimes also exhibiting the Extract of black Hellebor; Lastly, strengthening the Head and Brain with Spirit of Terra Sigillata.

VI. *Mania*, *Insania*, *Furor*, *Madness*.

§ 1. The Indications of Cure are, first a mitigation of the Symptoms: Secondly, a removal of the Cause, inducing that excessive heat: Thirdly, a strengthening of the parts afflicted, by a good diet, and Specific Medicines. § 2. If bleeding can be said to be absolutely necessary in any Disease, 'tis thought to be in this: yet bleeding only mitigates the Symptoms, or Violence of the Paroxysm: first, give a Clyster, then open a Vein of the Arm: the next day open a Vein of the other: *Platerus* affirms, That innumerable Mad people have been cured by bleeding in the Arms, Feet, Forehead, Nostrils, Hemorrhoids, and *Salvetella* of the Hand, if any Veins did appear in those places; repeating the said Bleeding to twenty or twenty six times by degrees: and then procuring sleep by Medicines both Internal and Exter-

R^x statim

nal, as we have taught in the former Section. § 3. *But while you are exercised in removal of the Symptoms, you must be then also very mindful of the Cause, which you may take away by Choller-Purgers, and Melanagogues, alternately used: giving also between whiles proper Clysters: Cupping Glasses to the Shoulders with Scarification; and Leeches applyed to the Temples and behind the Ears are good. Pilule de lapide Lazuli may be given à ʒss to ʒj. so also Oxymel Helleboratum, Extract of Hellebor, Electuary of Hellebor, Helleborated Wine, and the Tartar Pills of Quercetan, whose Doses search out in their respective places: and no ways inferior are several preparations of Antimony, as the Flowers, Vitrum, and Crocus: as Infusion of Crocus Metallorum, Vinum Benedictum, Spiritus Vitæ aureus Rulandi, Mercurius Vitæ, with many others.*

§ 4. *The Symptoms being remitted, and the Disease as it were overcome, you must prevent a Relapse, by continually exhibiting Specificks for six or eight Months after, and giving such things as may corroborate the parts of late afflicted: to which purpose we commend Confectio Alkermes of our prescription, Liquor of mans Blood, a Simple decoction of Pimpernel with purple Flowers, taken for forty days together: once in ten days you may purge with Tincture of Colocythæ mixt with the Extract of Lapis Lazuli: also the blood of an Ass taken out of the Veins behind the Ear, given to*

ʒss every morning and sweating upon it, for 3 mornings: to these add the Essences of Borrage, Bugloss, Pippins, Pearmaines, Fumitory and Succory, and Juleps made of them: Or this hereditary Specifick of *Sennerius*: Take Baum flowers M.j. chop them small, to which put S.V. ʒjv. prepared Pearl ʒss. mix and digest: and give 2 spoonfuls of the Liquor at a time. § 5. *Outwardly Bath the Head for an hour with a Ley made of Bay-berries and black Hellebor-Roots, very hot for 9 days together: Or, make an Epithem of Poppy water lbj, Sal prunellæ ʒj. Saccharum Saturni ʒss. Camphir ʒj: Musk ʒj. Or anoint with Balsam of Lead, and apply a Sheeps Lungs taken hot out of the Body; warming them again in water when cold: Oyl of Rosmary, or rather the Q.essence is very good: but the Lye of Bay berries and Hellebor, purges by all the Emunctories of the Brain, dissolves and brings away the filth wonderfully above all other things: if all these things fail, you must open the Scul (near the Crown,) with a Traine.*

§ 6. *An Observation of Gordanius: There was a Mad-man, who got a Wound in his Head, with a Fracture of the Skull; so long as this was open he was well, but still when it was healed up, he grew Mad again.*

VII. *Λιθαρτος, Veteranus, Oblivio iners; The Lethargy.*

§ 1. *The Indications of Cure are five-fold. 1 Revulsion. 2 Repercussion. 3 Evacuation of the Brain. 4 Strengthening the Brain. 5 A fit and proper Diet.* § 2. *In re-*

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ulsion there ought to be first a pre-
paring of the matter; secondly, pro-
per Purgation. To prepare the mat-
ter, You must make the Sick
smell to the Quintessence of
Rosemary, Oranges, Limons,
and Spirit of Sal Armoniack;
also you must give these things
(in their due Dose) inwardly for
some daies together, three or
four times a day, more especial-
ly Spirit of Sal Armoniack, for
this thins the coagulated and
thickned Blood, and makes it
fluid: in the mean season you
ought to give lenitive Clysters,
and keep the Belly soluble; and
for this purpose we commend E-
uema Hydragogum with ʒij or
ʒij. of infusion of Crocus Metallo-
rum. § 3. Purgation is the next
thing which is to be done, wherein
exhibit *Pilula de Agarico, Aggre-
guata, Auræ, de Opopanace, Ru-
dijs, or Tartareæ Quercetani*: these
purges you may mix with a lit-
tle *Castoreum*; you must not be
too fearful or curious in purg-
ing; for this Disease does much
require it, and the purge ought
to be very strong because the
humours are very stubborn, and
the senses almost overcome. I
have found *Confectio Hamech, Pi-
lula Holagoga, and Tinctura Catho-
lica Grulingij*, to be inferior to
no other Catharticks. To which
you may add *Pilula Euphorbij,*
Bentij, Diacallapa, Diagamba, and
Diartarib. But you must give
the milder purgers first, and
Cholagogues: after, the stronger
and Phlegmagogues: If all the
former things do nothing you
must give Antimonials, as *Aqua Be-
nedicta Rulandi*; which purging
both upwards and downwards,

brings such a quantity of Flegm
from the Stomach and Brain, as
that sometimes the Sick is cured
only with this Evacuation. Whilst
the Purgation works you must use
manifold frictions, rubbing and
bindings, as also a Cupping with
Scarification to the Back, Shoul-
ders, Arms and Thighs. § 4. Re-
percussion is done by repelling Me-
dicines applyed to the Coronall
Suture: Oyl of Castor is good
to anoint with (the Head being
shaved) and then to apply *Strictu-
cum Paracelsi*. Vinegar and Ca-
stor applyed to the Nose have
a special quality against sleep.
The fumes of sharp Vinegar
from a red hot Iron: the fumes
also of Brimstone: the horns or
hoofs of Beast burnt: Hair burnt,
the fumes of Amber, but above
all the scent of Spirit of Sal Ar-
moniack dissolve the coagulated
humors, and repercuss others
that would move to the Brain.
Rub the Soles of the Feet with
Salt and Vinegar, and anoint the
Hands with Oyl of Rue and
Castoreum: and put into the
Mouth *Aura Alexandrina* or *Con-
fectio Anacardina, Aqua Cælestis,*
Aqua Apoplectica. You may also
anoint the Head with Oyl of
Amber or with this. R Oyl of
Rosemary and of Sage, A. ʒij. Oyl of
Ben ʒss. mix them. If these
things do no good apply Cup-
ping-Glasses to the Crown, and
to the hinder part of the Head:
but a Vesicatory, with *Euphor-
bium* in it, is of great force.
§ 5. The third Intention is eva-
cuation of the Brain: this is done
with Sternutatories, such as we
have made in our Pharm. lib. 4.
cap. 21. sect. 82. to which you ought
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to add Castoreum : or else with the solid Errhines at Sect. I. § 5. aforegoing, mixt with a small proportion of Castor aforesaid: the juyce of Primrose root syringed up the Nostrils is excellent. § 6. *The fourth Intention is to strengthen the Brain*, for which purpose the Powers or Q.essences of Rosemary, Spike, Sage, Time, Wormwood, Limons, Oranges, Nutmegs, Castor, Cinnamon, Cloves, sweet Marjoram, Amber, are of extraordinary force given inwardly in Sack every day once, twice or thrice à gnt. x. ad xx. and anointing the Nostrils, Temples, and Sutures of the head with them outwardly : to these you may add Ambergrise, Musk, and Civet, as also Volatile Sal Armoniack : you must continue the use of Castor above all things; if the Disease continue, give gr. jv. in Oxymel every morning: this Remedy, saith *Trallianus*, has cured this Disease alone; but Potable Silver is said to be an absolute and perfect Cure above all things : you may also strengthen the head with these Pills. *R. Cubebs, Nutmegs, Mustich, Cloves, A. ʒj. Ambergrise ʒls. Musk gr. vj. with juyce of Marjoram make Pills* : Dose ʒj twice a Week going to Bed : Or with this Pouder. *R. white Amber ʒls. Diarrhodon Abbatis ʒij. Peony roots ʒjls. Dose ʒj. in Aqua Appleatica*, every New Moon. § 7. *The last Intention is a good Diet* : the food at the beginning ought to be but little, and of thin quality and substance, yet such as may make good juyce and nutriment ; you ought also often

to disturb the Sick, and if possible to rouse him out of his sleep. § 8. *Observations. Trallianus* saith That many desperate Lethargies have been cured with ʒj. of Scammony mixed with ʒij. of Castor in Oxymel ; and, *Oribasius* saith, There is no better remedy.

VIII. *Kægēs, Carus, Subeth*, deep Sleep.

§ 1. *The Cure of this Disease is the same in every respect as the former*, and to every Indication of Cure, the same Medicaments may be applyed ; if it may be supposed Curable : yet these following things over and above we may remark. § 2. *If it comes from a stupefaction of the Animal Spirits by Narcoticks*, Castoreum, Cassia Lignea, Cinnamon and its Oyl with Oxymel have their place, to also Spirit of Sal Armoniack. § 3. *If it comes from Poyson*, we commend our new London Treacle as a secret. § 4. *If from vapours elevated either in Feavers, or by reason of Worms*, you must seek for their remedies in their proper places. § 5. *However in general, Potable Silver is the perfect Cure*, sweating the Sick now and then with Bezoar Mineral, and Spirit of Harts horn : let the Sick also take constantly Elixir Proprietarii, or the Q.essences of Rosemary, Limons and Oranges.

IX. *Ἀποπληξία, Apoplexia*, loss of sense and motion.

§ 1. *The Cure little differs from a Lethargy, having the same Indication and Remedies*: besides which (in regard this is a more violent and dangerous Disease) we have these *Observations*. § 2. *First let there be a gentle concussion and rousing of*

the Sick, as also Frictions in the extreame parts with Salt and Vinegar. § 3. Secondly, make a *Revulsion of the matter by Cupping Glasses on the head, chiefly the hinder part thereof (which is indeed the only remedy :) by strong Clysters and Suppositories by Vesicatories applied to the Nape of the Neck and Shoulders by application of Actual Cauteries to the Crown of the head, hinder parts, and other places adjacent till the skin becomes hard and crusty, which are afterwards to be made to run well: by Erhines and Sternutatories put up the Nostriis: by purging with Mercurius vitæ if the Sick be a rustick and strong person: and lastly (as common Physicians advise) by opening the Vein of the forehead, Jugular and head vein, which is to be done without delay, and often to be repeated in the space of a few hours, but this Barbet will scarcely allow of, he is against Blood letting.* § 4. Thirdly, discuss the matter, and strengthen the parts debilitated, this is to be done by those things mentioned Sect. 7. § 6. to which we here add Spirit of the Brains and Blood of a Sheep, Goat or Bullock, Tincture of Pepper, fume of Amber or Partridge feathers, Spirit of Lilily Convally; Powers or Q. essences of Rosemary, Lavender, Wormwood, Carraways, Amber, *Essentia Magna, Spiritus Cardiacus, Carminativus, Hystericus, Elixir Vitæ, Proprietatis, Balsamum Apoplecticum Horstij & Myrsibæ, Aqua Cephalica Mylij & Horstij, Aqua Apoplectica Crollij & Senner-* Spirit of Sal Armoniac, the

stinking Spirit of Targar, *mixture simplex*; Salt of Mans Skull given ℥j. at a time twice a day; sweet Spirit of Salt to gut. xv. or xx. Volatile Salt of Amber, Civet, Musk, Castoreum, Balm of Gilead, Quintessence of Juniper, Spirit of Mans skull and of Mans Blood, and of Mint, Essence of Ambergrise, Volatile Sal Armoniac, Mistleto of the Oak, Spirit of black Cherries. § 5. An Observation. A young Woman fell into an Apoplexy, we cured her with this: ℞ Musk gr. v. Ambergrise gr. iij. make a fine powder and give it for a Dose in Canary: it was exhibited morning, noon and night, for three days: outwardly, we used proper Topicks. Barbet has several Observations of persons in an Apoplexy, which being let Blood all of them dyed. See his *Praxis lib. I. cap. 2. sect 9.*

X. Κατάληψις, Cangelatio, A stupefaction of body and mind with stiffness.

§ 1. The Cure of this Disease is to be considered either as to the time of the Fit, or time out of the Fit. § 2. In the Fit, you are to use those things which we have prescribed in a Letbargy and Apoplexy, among which we principally commend the Volatile Salt and Spirit of Sal Armoniac inwardly exhibited, and outwardly applied; the Oyl and Q. essence of Amber, &c. but Aurum and Argentum Potabile are of excellent use above all things: for want hereof you may use the Quintessence of Cinnamon. § 3. Out of the Fit you are to consider the Cause; if it proceeds of Melancholy, you are to abate

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and take it away, and alter the habit of the Body, as we have taught in its proper place. § 4. If from a cold and moist distemper, it is to be cured with those things which we have appointed for a cold and moist distemper of the head: in this Case let the Body be first gently purged with *Diacassia*, afterwards with strong Phlegmagogues; then perfect the Cure as in a Lethargy. § 5. Let his Diet be hot, moist and of thin parts.

XI. *Ἐπιληψία, Epilepsia, Morbus Comitialis*, The Falling sickness.

§ 1. We are to consider the Cure of this Disease as it has relation either to Children; Or to persons elder and of more mature years. § 2. The Cure of the Epilepsy in Children we have already handled at large in cap. 22. sect 3. to which we shall in part refer you. Yet that we might not be much wanting we have though good to add these following things. To a Child new Born before it Sucks give this powder. *R* Roots and Seeds of Peony, white *Dittamnus*, *Misteto* of the Oak, *A* ʒss. seeds of *Atriplex* ʒij. powder of Mans skull ʒiij. red Coral prepared, Hyacinth prepared, *A* ʒjss. Elks horns prepared ʒss. Musk ʒj. Leaf Gold ʒj mix and make a powder. Dose ʒj. in a little Breast milk, which repeat for three days, or else *Pulvis ad Vertiginem Cratonis*; but rather our *Pulvis Antepilepticus magistralis*, than which there is scarcely a better remedy. See it in our *Doron lib. 2. cap. 21. sect.*

. this is for prevention. § 3. But where the Disease has already seized you must first make the Belly soluble with a Clyster or Suppository,

then purge with *Diacarthamu* ʒij. to a Child a year old, or with *Sale of Vitriol*; you may also apply Vescicatories to the Nape of the Neck, and Cupping Glasses with Scarification to the Shoulders and Loyns; but in Children of a few days old you may apply a Caustick to their Necks; but *Riverius* thinks an actual Caustery much better, and purge 2, 3 or 4 times a month with Syrup of Roses or of Cichory with Rhubarb: Evacuation being thus made, you must come to Specificks, among which are *Magistery of Coral* given ad gr. x. in Breast Milk; Ashes of the dung of a black Cow given ad ʒss. the aforedescribed powder, as also *Pulvis Epilepticus Wehardi*, *Antepilepticus nost.* ad *vereginem Cratonis*, and our *Magistral Antepileptic* aforementioned. Two or three drops of Oyl of Amber with as much Spirit of Vitriol given in Betony or Tile flower water, does presently free the Child from a fit of the Falling sickness: To also a few drops of the Blood of the Navel string given in Breast milk. The smoke of Tobacco does free Children from the Epilepsy; the small end of the Pipe being put into the Childs mouth, and to blown in from the other end. *Skenkin Cent. 5. Numb. 85.* faith, That a little fine Musk given in thin Wine, twice or thrice a day, is an approved remedy, and will perfectly cure. The root of wild Valerian given in powder in Milk, has cured many. This Cure is excellent both to cure and preserve. *R* Peony root ʒiij. Musk ʒj. *SV* spirit of Castor.

§iv. digest till the Tincture is deep give it inwardly *à gut. x. ad xx.* and wash the whole Body of the Child with it warmed. *Unice-* *rus* has this: Take a little black sucking Puppy (but a Bitch Whelp for a Girl) strangle it, open it, and take out the Gall, which has not above gut. iij. or iv. of pure Choler in it: give it all to the Child in the time of the fit, with a little Tile-flower water, it will cure presently, as it were by a Miracle. Anoint the Nostrils with Oyl of Amber; and being mixt with equal quantity of Oyl of sweet Almonds or of Ben, anoint the Temples and backbone therewith. § 4. *The Cure in persons of Elder years.* This respects either the Paroxysm near approaching; Or the Paroxysm present; Or the time without the Paroxysm. § 5. *In a Paroxysm near approaching you may give* gut. iij. or iv. of the Quintessences of Castor or Amber, in the Antepileptick water of Langius: Or instead of those Quintessences, you may give *à gut. vj. ad xij.* or more of the Spirit of Sal Armoniack; Or else Laudanum Paracelsi *à gr. j. ls.* ad iij. mixt with one drop of Oyl of Camphir. § 6. *In the Paroxysm it self; The mouth is to be opened, and a Bole of Castoreum and Rue to be interposed; make Revulsion by Friction and Ligature, and let the Belly be immediately opened either by Suppositories or a sharp and quick Clyster. R Decoctum Carminativum lb j. Tincture of Coloquintida one Spoonful: Infusion of Crocus Metallorum ab ℥ij. ad iv. or v. mix and make a Clyster. Anoint the*

Nostrils with Balsam of Amber and Rue; besmear the Tongue and Pallat with Venice Treacle, dissolved in Vinegar of Rue, or Quintessence of Limons; if these things prevail not, you must use Sternutatories and Erhines; Or impose a Turtle, with all its feathers pulled off, to the Navel. Inwardly give Black-cherry water, and water of Swallows, mixed with salt of Mans Skull and Q. Essence of Amber, Oranges or Limons; or rather with the Spirit of Sal Armoniack. § 7. *The Cure of the Epilepsy out of the Paroxysm, must be varied according to its causes and kind.* It consists first, in preparation and evacuation of the morbidick matter. Secondly, in correcting of the malignity. Thirdly, in drawing away the matter remaining in the brain. Fourthly, in corroborating and strengthening the Brain and Heart. Fifthly, in a proper and select Diet. Sixthly, in exhibiting of Specifick remedies, which in the Disease are always the same, let the Disease come of what cause soever. § 8. *The first intention which is preparation and evacuation of the morbidick matter; now since the matter offending in a true Epilepsy, is for the most part slegm, we shall direct our general Cure to that, but if Choler or Melancholy abound, you must consider them. You may prepare the Humor with this; R Oyl of Tartar ℥ss. volatile Sal Armoniack, and of Amber, A. ℥ss. mix them, Dose à gut. x. ad xvj. three or four times a day. Or this, R Salt of Self-beal, of*

Ammoniacum, A. ʒss. Crabs Eyes ʒij. powder of Mans skull ʒj. mix and make a powder for 6 Doses, to be taken twice a day in Oxy-mel. Or this, R volatile Salt of Amber and of Harts-horn, A. ʒj. Castor ʒij. mix and dissolve in Syrup of Elder ʒiiij. rectified SV. ʒij. to be taken twice a day for four days. § 9. The purging of the morbidick humor, is to be done with things proper to the same, always noting this, that you mix specificke Antiepilepticks with them. If the body be bound, you may now and then exhib the Clyster at § 6. or some other proper thing, then purge with a proper Phlegmagogue, as *Extractum Phlegmagogum Quercetani*, mix and with *Extra. Castorei Zwelferij*, and dissolved in Rosemary water; Or *Tinctura Phlegmagoga*, Or *Hydragoga Grulingi* mixt with *Tinctura Antimonij Myrsichti*; Or *Diajallapa* Or *Diagam-ba* mixt with a little Volatile Sal Armoniack, or Salt of Amber, or yellow flowers of Sal Armoniack: The Hologogue Pills are famous for this purpose: So also Salt of Vitriol, and Emetics of Antimony; *Quercetans Syrup* of Tobacco, but it is to be given by a wise Physician. by reason of its violence: Or this, R Scammony, Resin of Falap, Aloes A. gr. vi. *Cremor Tartari*, gr. viij. Oyls of Rosemary, Lavender, and Limons, A. gnt. iij. Salt of Amber gr. iij. mix for a Dose. § 10. For correcting the Malignity, we commend *Spiritus ex tribus*, commonly called *mixture simplex*, given a ʒj ad ʒij mixt with gr. ʒ. or xij. of our New London

Treacle. Or the Prophylactick water of Sylvius mixt with the Antiepileptick Spirit of Vitriol in which a little Salt of Carduus is dissolved. § 11. The next thing is to draw the remaining matter (if any be) from the Brain. This may be done by Apoplegmatisms, Errhines, both solid and liquid: you may also apply the Seton to the nape of the Neck, or a Caustery; and a Vesicatory to the forehead or the Head; but a Seton in the Neck more powerfully draws back the Humor from the Brain. § 12. You must corroborate the Brain and Heart with Cephalicks and Cordials, among which things we commend to you the Q. Essences of Cinnamon and Rhodium, as chief, the Tinctures of Musk and Ambergrise; and the Confectio Alkermes of Our prescription. § 13. The Diet must be slender, and all things generating Wind and Vapours, Wine, Venerie, &c. are to be avoided; and let the sick drink ordinarily Hydromel, or a small decoction of Guaiacum and Peony roots. § 14. Lastly, let there be a continual exhibition of Specificks, the chief of which are roots and leaves of Angelica, Birthwort, Mugwort, Milletoe, Bryony, Hypericon, Peony, Squills, Divels-bit, Tormentil, Wood Valerian, Swallow wort, Pimpernel, Wood-Rue, Betony, Polly, Vervain: flowers of Hypericon, Lilly-Convally Line-tree, Stachas, Orrach, Peony, Lavender, Rosemary: seeds of Peony, Hartwort, Cardamoms. Black cherries: Guaiacum, Box-wood, wood of

the Lin-tree and Oak; Xyloaloes, *Lignum Rhodium*, Agarick : Amber, Ambergrise, Civit, Musk, *Castoreum* Rennet of a Hare, Horns and claws of an Elk, Bull, Hart, Goat, Unicorn, Asst. s and Mans-Skull : Gall of a Whelp, Lamb, black Cat, Bear, Vulture : Dung of a black Cow, Stork, Peacock : Liver of an Ais, Goat, Moles, Green Frogs : ashes of a Swallow, Cuckow : milk of Asles, Goats, Mares; Spleen of a Horse : Triangular bone in the head of a Pike : The Magpye : the blood of a Hee-Cat. Mans blood drunk hot : Testicles of a Horse Cock : Pearls and Coral.

§ 15. Among Preparations and Compound we have these : The water Hydromel, Wine, Spirit, and Elixir of *Quercetan*; Volatile Salt and Spirit of Sal Armoniack; *Paracelsus* and *Hartmans* Antepileptick Spirit of Vitriol, of Mans Brain, and Harts-horn, Spirit of Tartar Virriolated and Sweet Spirit of Salt, *Aqua Anhaltina*, water of Swallows; of Mans-Dung, *Aqua Theriacalis* : Tincture of Sol and Luna, of Corals, Antimony and Castor : The Elixir of *Crollius*, *Crato*, *Mynsicht*, and *Schröder*; Elixir of Citrons: the Q. Essence of Cinnamon, Cloves, Mace, Nutmegs, Oranges, Limons, Amber, Caraways, Rosemary, Marjoram, Lavender, Rue, Rhodium, Elks claws: *Pulvis Antepilepticus nöst.* and *Magistralis nöst. ad Vertiginem cratonis*, and *Epilepticus Mynsichtii*, Bezoar mineral and Lunar : Salts of Mans-skull, Harts-horn, Amber, Cinnabar native, of Antimony and the common

Aurum Vnæ: the natural Cinnabar *Crato* calls the Loadstone of the Faling-sickneis; but that of Antimony exceeds it. § 5. But amongst all these things, some particulars are said to excel: as, Mistletoe of the Oak; the right hinder hoof of the Elk; magister, Oyls and Salts of Mans-skull; water of Lilly-Convally, and of the Tile-tree; male Peony roots, gathered in July near the change of the Moon: Our *Confectio Alkernes*; Musk, Quintessence of Oranges, Limons, Cinnamon and Rosemary: powder of Elder berries given to ʒj. in Hysterick water. *Fabius Columna* commends the root of wild Valerian, and that it cures being twice or thrice taken; Dose half a spoonful in Wine, Water, or Milk. *Rulandus* commends the *Oleum Ligni Heraclei* which is said to be the Oyl of Hazel wood; Dose gut. iij. or iiij. Oyl of Box-wood given gut. iiij. at a time, in Tile Flower water: gut. iiij. of Spirit or Oyl of Sulphur for certain daies is thought to be very powerful. But the Oyl and Quintessence of white Amber, and the fine powder of Musk are inferior to no other thing. To these you may add the *Pilula Lunares*, which are a great specifick; as also Our *Magistral Epileptick Powder*, and the Epileptick powders of *Crato* and *Mynsicht* aforementioned.

§ 16. If all these things fail, the last remedy is to open the part of the Skull with a Trepan, at a distance from the Sutures, that the evil air may breath out; by this means many desperate Epileptic

fies have been cured. § 17. If the Epilepsy comes by consens of other parts, as the Spleen, Womb, &c. you must begin with the part affected, which is to be cleansed and strengthened by convenient Medicines, such as we have declared in their proper places; always joyning with them Specifick Antepilepticks. § 18. Observations. *Jachinus* saith, that by the Decoction of *Guajacum* he has cured several Epileptick persons; let it be taken for 40 days together. *Angelus Sala* saith, That with salt of Vitriol, given but thrice, and once every fourth day, he has cured the Falling-sickness: and *Cent. 2. Obs. 77.* that with *Stribium* thrice calcined he cured a Girl of eleven years of Age, of an Hereditary Epilepsy. I cured a Youth with the specificke Electuary of *Crollius*, and my Magistral Epileptick powder, given every morning alternately for a month. *Fabritius Hildanus* cured a youth who had a fit every day (after all other means was used in vain) and a Girl of 18. years of Age, who was born so, only by continuance of a Seton. *Carolus Piso* cured two, by applying a Caustick to the forepart of the Head. *Columna* cured many with the root of wild Valerian. And I have cured several only by the powder of Mistletoe of the Oak.

XII. Σπασμὸς, Convulsio, Convulsion or Cramp.

§ I. In the Cure of a Convulsion there are I. The removal of the Morbifick matter by purgation. 2. A calling it another way by Revulsion. 3. A discussion of the of-

fending matter, and a warming of the part or parts hurt. 4. A corroborating of the part or parts afflicted in particular, or of the whole body in general. § 2. As to the first Intention, Let this Clyster be exhibited; R. Roots of Sow bread, *Colocynthus*, black Hellebor, *Carthamus* Seeds, A. ʒj ss. Rosemary ʒj. Water lbjss. boyl to lbj. strain and add Honey ʒij. Oyl of Amber, Sal Gem, A. ʒss. mix them for a Clyster: the next day give strong Phlegmagogues, whether Pills, Electuaries, Pouders or Tinctures, with which mix Carminatives, and to every Dose pr. iv. or vj. of Castor: In this Case *Tinctura Phlegmagoga Grulingij* is admirable, being mixt with Castor, as aforesaid. § 3. Make Revulsion by Gargarisms, Frictions, baths of Sulphur or other Minerals, Cupping Glasses with Scarification and sometimes without, first to the remote parts, then neer to the parts affected: if the Disease be in the Thighs or Legs, apply them to the Buttocks or Loyns; if in the Arms, then to the Neck and Shoulders: a Vesicatory also may be applied to the place opposite to the parts affected; and if the Fountain of the Disease is in the head or upper parts, use Errhines, Sternutatories and such like, in the mean time you may give several sharp Clysters, especially that at Sect. VII. § 2. aforegoing. § 4. Dissolve the matter offending with Oyls of Castoreum, of Turpentine, of Euphorbium, Amber and such like distilled, and mixed with their equal weight of Oyl of bitter Almonds, or Ung. Martiatum, Oyl of Nutmegs.

megs by expreffion mixed with a little of their deftilled Oyl, is an incomparable thing : Balsams of Rosemary, Nutmegs, Mace, Limons, Oranges, and of Juniper are of great force. We especially commend *Balsamum Philosophicum*, *Catholicus Steinbergij*, *Polychrestum Mynsichti*, *Nervinum Schroderi*, *Vitæ Balsam*, *Paralyticum Clossæi*, and *Balsamum Sacrum*, any of these may be used either alone, or mixt with a third part of Oyl of Ben. or of bitter Almonds : Vervain and Motherwort may be worn about the Neck as an Amulet. § 5. *The Corroborating of the parts weakened is by anointing the Spina Dorfi and Original of the Nerves with some of the former Balsams, especially with Balsam of Amber and Nutmegs ; and applying over the place afflicted Empl. Hystericum.* Balsam of Sage is a most incomparable thing. Inwardly you must give Q. Essence of Amber, Sage, Rosemary, Myrrh, *gut. xx.* at a time every morning fasting, in a glass of choise Canary : and generally for the most part all these things we have enumerated as Specificks in the Apoplexy are of manifest power and force here ; Oyl of Whelps and of Foxes have place among externals, and ought often to be used immediately after the former hot things, because they supple and mollify very much, and withal by a specifick force ease pain. § 6. *An Observation.* We cured a Girl of seven years of Age, afflicted with an Universal Convulsion, by giving *Aqua Picatum Composita*, Q. essence of Am-

ber, and of Sage, every morning alternately, and anointing outwardly with Balsam of Amber and Nutmegs.

XIII Παράλυσις, Paralysis, The Palsy.

§ 1. *The Intentions of Cure follow the variety of the Causes ; but for the most part it proceeds of Flegma and a cold distemper, and therefore there ought to be an emptying of the first and principal passages : here you may use Crato his Vomitory, made of juyce of Radishes, in which roots of black Hellebor have been infus'd, but if the matter be then in its flux and motion, the evacuation ought to be so much the stronger, you may give vinum Benedictum, or Mercurius vitæ, or our Royal powder which is a most admirable thing : some exhibit the flowers of Vitrum Antimonij in a proper mixture.* § 2. *The second intention is a certain and continued preparing of the matter, and the alteration of the cold and moist quality of the Brain : this is done by Cephalick Medicaments, among which are Iva Arthritica, flowers of Primroses, of Rosemary, Sage, Lavender and of Lilly Convally, the Q. Essences of Rosemary, Nutmegs, Cinnamon, Oranges, and Limons, Confectio Alkermes of our prescription.* § 3. *The third Intention is to carry off the Morbifick matter by purgation, for which purpose you may give Pilule Panchymagoge, Or ex duobus, Or Holлагогe mixed with flowers of Antimony or Pilule Lunares : Or an Infusion of Mechoachan : Or this of Riverius. R Pilule sennæ majores, Cochiae minores, A 3ls. Tro-*

Troches Albandal, gr. iv. mix and give them once a week. § 4. The fourth Intention is to excite and provoke sweating, which is done with the prophylastick water of Sylvius, Volatile Salt and Spirit of Sal Armoniac, Tincture of Gum Guajaci, Venice Treacle, Our new London Treacle, Bezoardicum Minerale and Lunare, Tinctura Diaphoretica Paracelsi, strong Decoction of Guajacum, Spirit of Guajacum, Argentum porabile, with many other things of like nature: some use a Decoction of Danewort, by which sweat is provoked violently: you may also help forward the Diaphorests by the help of a sweating Chair, Or, of hot Baths or of Frictions; Or, by bricks laid hot to the soles of the feet and to the sides. § 5. The fifth Intention is a particular Evacuation of the Brain by Apoplegmatisms, Errhins, Sternutatories, and such like, for which our solid Errhines at Sect. I. § 5. are of good use; so also the juyce of Primrose roots; but there is nothing more effectual than the Pulvis Sternutatorius Deckeri in our Devon lib. 2. cap. 21. sect.

A Caustick may be applyed to the Nape of the Neck. or to the sound Arm. Cupping Glasses may be applyed to the heads of the Muscles of the part affected; let them be narrow mouthed, applyed very hot and not stand long, lest they disperse too much; after apply upon the place a Plaster of Pitch and Pine Rosin, to comfort it: you may apply a Synapism or Dropacism til the part looks red, but not to blister; for so the Spirits would be dispersed,

which in this Case ought chiefly to be preserved. § 6. The sixth Intention is by application of Topicks, wherein the Balsamum Apoplecticum Horstij & Mynsichti, Catholicum Steenbergij, Polychrestum Mynsichti, Nervinum Schroderi, Vita Bilgens, Vite magis Compositum, and Paralyticum Glossier are of admirable use: So also the Chymical Oyls of Rosemary, Sage, Rue, Savin, Lavender, Pepper, Limons, Oranges, Amber, mixed with Unguentum Martiatum, or Excestreense, Or Oleum Catellorum, or Oyl of Hypericon Simple or Compound, or of Castor; and then anointed morning and evening upon the part affected, and all along the Back-bone from the Vertebrae of the Neck to the Anus: if after a time the Disease yields not to the aforementioned things or other like; apply down the Backbone this Emplaster: R Pitch, Galbanum, Sagapenum, Ammoniacum, A. ʒj. Pyrethrum, Mustard seed, A. ʒss. Wax ʒiij. Euphorbium ʒij. with Oyl of Turpentine (or of Amber) q.s. make a Plaster. § 7. The seventh Intention is a good Diet, and the administration of Specifics. Riverius, Prax. lib. 1. cap. 5. has this excellent Diet, which he would have drunk for 15 days together, but you may take it 30 or 40 days if you see need. R Guajacum rasped ʒiij. bark of the same ʒj. Spring-water lbiv. infuse 24 hours and boyl to the Consumption of half; at the end add Sena ʒj. Turbith, Hermodactils, A. ʒij strain it, of which take half a pint every morning: and for ordinary Drink let the Sick take

take a small Decoction of Guaiacum in Hydromel : But the Diet in Cap. 26. Sect. 18. § 16. is inferior to none that I have met with. For inward Specificks to be taken two or three times a day during the whole Cure, these following are approved, viz. *Elixir Proprietatis Paracelsi* & *Maxij*, Spirit of Tartar, *Confectio Alkermes* of our Prescription, Spirit of Harts horn, Volatile Salt of Harts horn, Urine, Amber, Mans bones, Armoniac, Spirit of Sal Armoniac, Q. Essences of sweet Marjoram, Mint, Origanum, Rosemary, Rue, Savin, Oranges, Citrons, Limons, Dill seeds, Carraways, Cinnamon, Cloves, Nutmegs, Sassafras, Rhodium, Juniper berries, Amber, Camomil, Sage. Mans skull, Harts horn and wood of Aloes, of any of which the Sick may take *2 gut. x. ad xx* at a time in a Glas of their Decoction, or in Canary. § 8. If it comes from the Scurvy, or is Hysterical, you must cure it according to the Methods of those Diseases; adding to those Medicines Antiparalyticks : If it comes from Choler or Melancholy, it is the same with Hypochondriack Melancholy : In this case Essence of green Tobacco leaves with Malmsey or Sherry Wine, wonderfully resolves and restores, if it be long chafed in : so also the fomenting with Wine in which Q. Essence of Rosemary or Juniper berries has been affused, and then anointing twice a day with this mixture. *Rx* Spirits of Salt, of Vitriol, and of Turpentine, *A. ʒij.* putting in the Spirit of Turpentine drop by

drop. After the use of it anoint with Oyl of Hipericon : it is said perfectly to restore the Paralytick Member.

XIV. *Tetanus*, Tremor, Trembling or shaking.

§ 1. The Cure of this is altogether the same with the Cure of a Palsy, only with this difference, that weaker Medicines sometimes may do, for as much as a Tremor is often but the forerunner of a Palsy. § 2. But of Specificks for this purpose to be taken inwardly, these are the chief, viz. Essence and Q. Essence of Bawm and Arabian Stachas, Q. Essence of Balm of Gilead; *Elixir Proprietatis*, which ought constantly to be taken. § 3. Among External Medicaments these are highly approved of, to wit, Oyl of Trefoil flowers, Oyl of Foxes, the Oyls of Whelps, of Castor, and of Pepper, laying over the part *Empl. de minso* spread upon Cloth. See the Section of the Palsy.

XV. *Epidaurus*, Incubus, The Night Mare.

§ 1. The Cure of this differs very little from the Cure of the Epilepsy; but this is the less dangerous Disease, and often the fore runner of the falling sickness, and therefore to that we shall chiefly refer you. But in the methodical cure thereof we have four principal Indications. § 2. First the preparation of the matter fomenting the vapors, by such things as cut and cleanse, as Oxytel, Syrup of Limons and Citrons, *Mei bel-leboratum*, Oxytel of Squills. § 3. Evacuation of the Morbifick matter, which is done with *Tin-ctura Melanagoga*, or *Phlegmagoga*

Grulingij (but let the purge be according to the humor abounding :) If these things do no good you must be necessitated to use *Vinum Benedictum*, or Infusion of *Crocus Metallorum*. § 4. The Head ought to be particularly evacuated by *Errhines* both solid and liquid, *Sternutatories*, *Apophlegmatisms*, &c. and then to be strengthened with *Specificks*, as Seeds of the Male Peony, Venice Treacle exhibited in Peony water, and many others, which you may find out in the Cure of the Epilepsy: and to prevent the like vapours for ascending again, you ought to exhibit always after eating, *Carminatives*, as powder of Coriander seed, Q. Essence of Carraways in Canary: and then things to strengthen the Stomach as *Diacydonium*, and such like. § 5. The last Indication has relation to the Diet, which requires sparing Meals, a light Supper, small beer, or Wine mixt with Water, a thin and pure Air, avoiding Melancholy and preturbations of the mind: let the Sick use exercise, and when they go to bed, avoid lying or sleeping on their backs.

XVI. *Μελαγχολία*, Melancholia, Melancholy or sadness of the Mind.

§ 1. In the general Cure of this Disease, you must first take care that the Diet of the Sick be of such things as cause no vapors to ascend, for which cause all strong Drinks wines and Spirits are forbidden; and sleep must be by all manner of means procured, lest the Sick should fall Frantick or Mad: and he ought often to make use of a Bath of

sweet water. Secondly, he must be perswaded into an Imagination quite contrary to what he thinks: Thirdly, the Melancholy humor ought to be purged out with Extract of black Hellebor, Pills, Tincture and Extract of *Lapis Lazuli*, the Body being beforehand prepared with Oxy-mel of Squills, Clysters, &c. Fourthly, the parts ought to be strengthened with Tincture of Coral and Pearls, Elixir *Proprietatis*, Bezoar Stone, Cochinele, *Confectio Alkermes* Vulgar, and of our Prescription, &c. Fifthly, that now and then the Sick must wholly abstain from taking of Medicines, and then return to them again. § 2. The particular Cure has respect to the Parts or the Cause: If it be of the brain only, it is cured by alteration and preparation of the peccant matter, by juyce of Fumitory, Goats Whey, Syrrup of Apples, Decoction of Polypody, Tartar Vitriolate, Crystals of Tartar: Secondly by Evacuation with Extract of Hellebor, by Errhines and Sternutatories, *Vinum Benedictum*, &c. the inferior passages being first opened by a Clyster: Thirdly, by procuring rest and sleep with Hipnoticks: Fourthly, by corroborating the Head, Brain and Heart, by *Confectio Alkermes*, juyces of Borrage and Bugloss, Tincture of the Chrysolite, and other appropriate remedies. § 3. If it proceeds from an indisposition of the whole Body, a melancholick Blood universally abounding through all the Veins and Arteries;

riet, &c. You must first prepare the Body by § 2. To which things you may add *Confectio Alhermes*, juyces of Endive and Succory. Secondly, you must Evacuate with things which moisten and mollify, and will work strongly, and this especially if the Blood be over-thick, unless the Body be very much extenuated and wasted; this evacuation is often to be repeated, but with the purges, you must always joyn things which exhilerate the Heart, such are juyces of Burrage and Bugloss, *Species Archonticon Nicholai*, *Lactificans Galeni*, and the like. Thirdly, by drinking of tart, sharp, and somewhat sour Drinks, amongst which, juyces of Sorrel and wood Sorrel are good, Essence of Blood-wort, &c. also let the sick often use hot Baths: Fourthly, strengthen the head by Specificks, both Internal and External, by imbrocations, fomentations, &c. Fifthly, let the Diet be ordered as aforesaid, letting the sick always abstain from all manner of Pulse, and meats of melancholy juyce. § 4. If it proceeds from disaffections of the Heart, Hypochondries or Womb, you must seek for the respective Cures in their proper places. § 5. If it be Erotick, as proceeding from Love, being contracted either by Philters or Love Potions; you must first vomit with Roots of *Asarum*, joyned with Bezoarticks, *Aqua benedicta Rutandi*: Secondly, use Sudorificks; as, Treacle Water, *Tinctura Diaphoretica Paracelsi*, *Bezoarticum minerale*, &c. Thirdly Specificks, as the Pou-

der of a Secundine. § 6. But if it be from a venereal lustful desire, and an over-great abundance of seed, you must use such things as quench the heat, as *Saccharum Saturni*, Lettice, Purslane, Willow leaves, *Sal Prunelle*; or things which diminish it, as seeds of *Agnus Castus*, Rue, &c. Or, the sick (if unmarried) must be married.

XVII. *Ἀμαυρόσις*, *Amaurosis*, *Gusta serena*, Blindness without manifest cause.

§ 1. In order to the cure of this Disease (where it is curable) you must order a good Diet, meats of pure and thin juyce, bread made with Fennel water, or the seeds thereof: Sawces to his meats and broth, of things extenuating, as Hyssop, Fennel, Marjoram, Betony, Sage, Eye-bright, and especially Nutmegs, which strengthen the Brain and clear the sight: let him eat Turneps often for they quicken the sight; so also Sparrows and Pigeons. But let him forbear all Pork and Swines Flesh, Geese, Fish, Pulse, Cheese, all things binding and windy, all Wines, Milk, and things made of it, hot Spices, Pepper, Ginger, Darnel, Lettice which especially hurt the Eyes, and all cold Herbs. Let him eat little at a time, and least at Supper: Let him instead of common Salt use *Sal Sacerdotale*, and let him live, if possible, in a dry and serene Air; for his drink, let him take a Decoction of *Sarsaparilla*, sweetned with Liquorice, and aromatized with Coriander seed. § 2. The next thing to be done is an Universal

Evacuation of the whole body, by Catholick, or Universal purgatives, such as are *Pilulæ Rudæ*, *Extractum Panchymaggon*, *Tinctura Cathartica Cloſſæ*, *Catholica Grullingij*, and the Catholick Electuary, as also *Confectio Hamech*; some of these things may be used once in five days for a month together. After this general Evacuation, the antecedent cause is to be removed by Revulsion; for this purpose you may use frictions of the extrem parts every morning. Cupping Glasses must be applied to the shoulder and back without scarification; and to the hinder parts of the Head with scarification; for these so powerfully draw the humors backwards, that presently after application, some have received their sight: at the same time apply a Vescicatory to the hinder part of the neck and let the blisters which are raised be kept long open with Beet or Colewort leaves often: when the Blisters are dried up, apply a Cautery or two to the neck, between the fourth and fifth *Vertebra* of the neck, so as the back-bone may be untouched, and one plaster may cover both; or instead thereof, you may apply a Seton to the same place, which will be more effectual: If these things do not, apply a potential Cautery to the coronal Suture, for this has sometimes done, when other things have failed: but if all things have been used in vain, and the case seems desperate; apply a Vescicatory over the whole head,

in form of a Cap (being first shaven,) and repeat it twice or thrice after drying up of the Blisters, for this has proved many times very successful. § 4. The next thing to be done, is to let the conjunct Cause be derived and dissolved, which is to be done by Apoplegmatisms, which draw the rheum out of the Head by the Pallate; as in a cold distemper of the Brain: by Errhines, either solid as those formerly described; Or liquid, as juyce of Primroses, Beets, Marjoram, mixt with white Wine, in which Manna has been dissolved: Or by this Composition of *Riverius*, *R. Dried Tobacco ʒj.* leaves of Sage, Marjoram, Betony, Eye-bright, Rue, Savin, *A. ʒj.* make a powder to be snufft into the Nostrils, for some days. But above all the *Pulvis Sternutatorius Deckeri*, does the work to a Miracle: We have known no less than four several Patients perfectly restored of a total blindness, by the only and alone use of this Medicine, and one of them was a woman, which had been blind almost 30 years; it is a very strong Medicine, and therefore must be used with caution. See it in Our *Doron*, *Lib. 2. Cap. 21. Sect. . § 5.* Lastly, while these things are doing, you must give things to strengthen the Brain and Nerves, to wit, a Diet made of Guajacum, Sarsa and Sassafras, to which are to be added leaves of Fennel, Betony, Marjoram, Baum, Eye-bright, Vervain Celandine, Rosemary, Nutmegs, Liquorice and Raisins of the Sun, in which let be dissolved (al-

(after straining) a proportionable quantity of Venice Treacle. Every morning fasting (except when you Purge) give ʒj. of *Confectio Humain*, or some other proper Specifick for the Eyes: and after the first Month, during the whole Cure, keep the body open with *Pilule Lucis Majores*, given 2 Dij. ad iij. at a time.

XVIII. *Ophthalmia*, *Ophthalmia*, *Lippitudo*, *Inflamatio Occulorum*, Blood-shot Eyes.

§ 1. A light Inflammation and which depends from external causes is a bastard *Ophthalmia*, and is called *Taraxis* or *Epiphora*: but a great Inflammation, from an internal cause, accompanied with Pain and Tears is a true *Ophthalmia*: and if it be so great as that the Eye-lids are inflamed and as it were inverted, so as that the Eye can scarcely be covered therewith, it is called *Chemosis*. § 2. For the cure of an *Ophthalmia*. 1. The External causes must be removed. 2. The antecedent causes are to be evacuated. 3. And to be repelled by Revulsion. 4. The conjunct cause is to be derived and discussed. 5. The part afflicted is to be strengthened. 6. A good diet is to be instituted. § 3. External causes, if they be from fire or smok, they are to be extinguished: if from dust or any thing got into the Eyes, it is to be taken forth, which may be done by blowing through a pipe, or by fringing in of Rose water: If from inversion of the Eye-lids, the hairs are to be cut off, or wholly pulled out: if the Eye-lids are as it were glewed together, they are to be separated with

Butter, Ale, or Cream; the Rheum is gently to be wiped away, and the sick ought to be prohibited rubbing his Eyes, for that will increase his disease: moreover the putting of all fat things into the Eyes must be avoided. § 4. The second Indication, required the evacuation of the Antecedent causes. If it proceeds from stoppage of the Terms, provoke them with a blood-red Tincture of Gum Guajacum, or other things, which are shewed in their proper places: if from a stoppage of the Hemorrhoides, apply Leeches to the Fundament: if from other humors, purge with the Tinctures of *Grulungius* proper to those humors; or with this, *Rx Cassia new drawn ʒvj. Diacarbolicum ʒij. Rhubarb ʒj. with Sugar make 2 Bolus*; Or you may exhibit *Pilule lucis majores*, infusion of Agarick, &c. these purges if the Disease is old are often to be repeated; but however in the beginning of the Disease, it is better to abstain from purging, lest the humors moved with too violent a medicine should fall more upon the part, to endanger a total blindness, which I knew to happen (through the Ignorance of the Physician) to one or two Patients. § 5. The third Indication requires Revulsion: this is done first by Phlebotomy, if the sick has been used to bleeding, which you must regulate according to the constitution, age, sex, strength of the sick, the kind and magnitude of the Disease. Secondly, by vesicatories applied

behind the Ears, and to the Neck. *Thirdly*, by applying Cupping-glasses to the shoulders and back both without and with scarification. *Fourthly*, by a Seton applied to the nape of the Neck; Or a Cautey to the hinder part of the head. *Fifthly*, by frictions and Ligatures in the lower parts: some apply Horse-leeches both to the Temples and behind the Ears, which are accounted a profitable means of derivation, § 6. *The fourth invention is to derive and discuss the conjunct cause: you may make derivation by Errhines, and application of Horse-leeches as aforesaid, as also by proper apoplegmatisms: Discussion is made by Topicks (which some Authors would not have applied till the end of three whole days) herein the Physician must follow his own Ingeny: let them be actually warm, without the least biting or corroding quality, things clean, pure and soft, corrected by specifick repellents, not too cooling, nor too astringent, nor too drying: these are to be applied (according as their form will admit) to the Neck, Forehead, and Eyes themselves: after which they are to be followed with Anodynes: but Opium and Opiate medicines are to be avoided without great and urgent necessity.* *Rx fine bole, Sanguis Draconis, Frankincense, Mastick, Red Roses, Balaustrians, meal of Lentills, A. 3j. with the white of an Egg and Vinegar of Roses, make a Cataplasim for the forehead and temples; so a Cataplasim of juyce of Nettles, and*

Wheat or Barly flower is excellent; for this juyce has a special vertue to stop defluxions. § 7. *Discussive, Repercussive, and Anodyn Topicks for the Eyes, of a middle consistency.* The pulp of a rotten Apple, or of a roasted Apple applied, asswages pain very much. This is an Anodyn Cataplasim: *Rx Flowers of Camomil and Melilot, A. P. j. rotten Apples 3ij. Fenugreek seed 3j. crums of brown bread 3ij. yolks of Eggs No. ij. Saffron 3ls. Cows Milk, q. s. boyl to a pultise. A pultise of new made Cheese without Salt is very beneficial: so also is this, Rx pulp of rotten Apples 3j. mucilage of Flea-bane and Quinoe-seeds, A. 3vj, white of a new laid Egg, beaten into water, womans Milk, A. 3j. mix and apply it to the Eyes.* Thin slices of Beef, Veal or Mutton, do very much assuage pain. A Cataplasim of Crums of white bread and breast milk, is of approved use: in like manner there is commended the Ophthalmick Oyntment, in Our Pharm. Lib. 5. Cap. 4. Sect. 19. and 65. of Crato's invention, Or, Ung. Refrigerans Galeni, Or this of Penotus, *Rx Tutty prepared 3jls. fresh Butter 3j. Rose water 3j. Camphir in fine powder 3j. Verdigrise impalpable gr. xij. mix and make an Oyntment.* It is an approved thing for an Inflammation both with and without matter, anoint the inside of the Eye-lids, especially about the Corners, and the sick will soon recover. Or this, *Rx May-Butter, juyce of Tobacco, A. boyl to an Oyntment; it is sharp, and must only be applied to the Eye-lids.* *Riverius*

rius in prax. lib. 2. cap. 8. commends Oyl of Flax, as the best and rarest secret: it is made of Linnen burnt between two close dishes; one drop mixed with the spittle of a child, must be dropt into the Eye with a feather. § 8. If the pain is intollerable, you must use Narcoticks, though sparingly and with caution. The white Troches of Rhass with Opium are of singular use: Or, you may dissolve them in Rose Water, and the Glair of Eggs; Or in Rose and Plantane waters mixed together. Or, you may make a solution in Breast Milk. This following cools and stays the Flux: Take the white of an Egg, beat it in a pewter dish, with pieces of Alum till it comes to an Oyntment, spread it on cloth, and apply it warm to the Eyes, but let it not lie too long, or above 2 or 3 hours. Saccharum Saturni dissolved in Rose water, and mixed with Pomatum doth powerfully cool. An Opiate Collyrium: R^e Mucilage of Fenugreek-seed made with Rose water ℥iij. Troches of Rhass, with Opium ℥j. Tutty prepared ℥ss. mix them: some dissolve in it Sarcocol ℥j. § 9. Eye waters which cleanse discuss, repercuss, and ease pain. An Eye-water from Barbet. R^e Waters of Eye-bright, Celandine, A. ℥ss. white wine ℥j. Sugar Candy ℥j. Tutty prepared gr. xv. glass of 8 gr. viij. Camphir gr. iiij. white Vitriol gr. ij. mix for a collyrium. Another from the same Barbet: Wheat, M. iiij. bruised ginger ℥iij. common salt ℥j. White wine, Rose, Fennel and Plantane water, A. ℥x. infuse 40

days in a Copper vessel; strain and keep the liquor for use. A third water from Riverius which mitigateth Inflammations, discusses and hinders Defluxions, R^e White Vitriol ℥j. Plantane water ℥iij. dissolve strain and drop into the Eyes. A fourth water from Endive or Succory flowers, which we learned from an old woman a Gardiners Wife; and it is a wonderful thing: see it in Our Pharm. Lib. 1. Cap. 5. Sect. 19. A fifth Eye-water, where the Eyes are hot and run much; R^e White wine or Rose water, ℥ij. Lapis Calaminaris in very subtil powder ℥ij. mix and wash therewith: but some take a stone of Calaminaris whole, and heating it red hot, quench it 7 or 8 times in the Wine, it is of most admirable use. A sixth Eye-water from Crolius; R^e Saccharum Saturni gr. xij. Sal Armoniac gr. iiij. Rose water ℥iij. mix them and drop it into the Eyes morning and evening. A seventh Eye-water is made of the Common Lac Virginis. An eighth Eye-water from Barbet, R^e Saccharum Saturni gr. vj. white Vitriol gr. iiij. Camphir gr. ij. dissolve them in the white of an Egg boyled hard, the yolk being taken away. A ninth Ey-water from the same Barbet, R^e waters of Fennel and Ey-bright, A. ℥j. common Salt ℥vj. Tutia prepared, white Vitriol A. ℥ss. let them boyl a little, and keep it for use. Barbet saith, he would not that the great quantity of Vitriol should affright, for that it only causes a slight pain, which suddenly vanishes, this water being of so great virtue, that it

cannot be sufficiently extolled. A tenth Eye water very resolute, *R* waters of Eye-bright, Fennel, *A.* ʒj. Mucilage of Fennugreek seed ʒls. Sarcocol washed in Breast milk ʒls. Frankincense, Aloes, *A.* ʒls. Saffron ʒls. mix and make a Collyrium: but if you would have it to dry more, put into it prepared Tutia ʒj. An eleventh Eye water is this; *R* a small Lixivium of Quick-lime lbj. *Sal Armoniac* in powder ʒj. mix and let them stand one night in a brass or Copper Basen, then filter and keep it for use: See Our Pharm. Lib. 3. Cap. 11. Sect. 26. A twelfth Eye-water made of Blew Bottles, which see in Our Doron Lib. 2. Cap. 1. Sect. . A thirteenth Eye-water, which restored the sight of the Emperor of Constantinople, see it in Our Pharm. Lib. 4. Cap. 11. Sect. 22. To these you may add 14. *Aqua Ophthalmica*: 15. *Aqua Visum Conservans*: 16. *Aqua Ophthalmica Bruni*: 17. *Aqua Ophthalmica Quercusani*: 18. *Aqua Ophthalmica Schroderi*: 19. *Ophthalmica Viridi*: 20. and *Aqua Ophthalmica Nostra*, all which you may see in Our Pharm. Lib. 5. Cap. 1. Sect. 8. 9. 10. 11. 23. 14. and 15. Amongst all these here enumerated, the Artist is to make choise of that which most answers his intention. § 10. The fifth intention is to strengthen the part assisted: this is done by fomenting the Eyes with Decoctions of Hyssop, Fennel, Pennyroyal, Camomil, or Melilot, also by washing the Eyes with Fennel Water, or with Fennel water mixed with red Wine; Or with the *Aqua Ophthalmica* in

Our Pharm. Lib. 4. Cap. 11. Sect. 22. Or with this, *R* Rhenish Wine lbij. Rose Water lbis, Tutia prepared ʒij. Cloves in powder ʒj. Camphor ʒls. mix, and digest in the Sun a whole month, shaking it once every day, then filter, and drop thereof gut. ij. or iij. into the Eyes, morning and evening: it takes away the oldest redness, dries up weeping and Fistula's, consumes all superfluities, and quickens the sight: inwardly, give the Queen of Hungaries water, morning noon and night. § 11. The sixth and last Indication has relation to the Diet, which let be cooling and moistning; let his meat be rather boyled than roasted, and of things liquid than solid: let his drink be Barly water with Liquorice, let his belly be kept soluble, and be in a temperate and pure Air, without smoak, dust or wind, and somewhat darkish withal, let him look on sky or green colors, and let him sleep and rest as much as he can; but let him avoid Garlick, Onions, Salt, Pepper, Milk, Sugar, Honey, Wine; all sharp, biting, salt and sweet things, and such as quickly turn into Choler; let him avoid all motions, especially of his Eyes and Teeth, passions, especially anger, &c. Let him keep both Eyes shut, and when he sleeps, let him sleep with his head high, and most inclining to the sound side.

XIX. *Λευκωμα Leucoma*, Albugo. The Pearl or white spot in the Eye.

§ 1. The Indications of cure are six-fold; first, by making

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Universal evacuations, to take away the antecedent cause, which you may do with those things appointed as purges in an Amaurosis and a Cataract. § 2. Secondly, by making Revulsion, in proper places and parts, as we have formerly taught, thereby to prevent a new defluxion from the Eyes, which would be caused by applying hot or sharp Medicines to the place; this you may do with Vesicatories, Cuppings, Ligatures, Frictions, &c. § 3. Thirdly, by derivation with Apoplegmatisms, Sternutatories, Erubins, solid and liquid. § 4. Fourthly, by applying Emollients to soften the hardened matter (with Spunges) made of the Decoction of Fænugreek, Fennel, Celandine, Ey-bright, Melilot and Mallows; or by letting the vapor of it go up into the Eyes. § 5. Fifthly, by application, of Discussives, which are as necessary here, as in the cure of a Suffusion: The juyce of Fennel does potently discuss in this case; more especially if it be mixed with a drop or two of the Balsam of Peru. So also the juyce of Celandine mixed with Honey: water of Rosemary flowers, Centory, Brook lime, &c. mixed with Honey; but above all, the Oyl of Flax (made of burnt raggs, between two close dishes) mixt with the spittle of a child, and laid on with a Feather. § 6. By absterfion, wherein several of the Collyriums or Eye waters mentioned in the former Sections may be useful: to which we may add these things following: Honey it self cleanses much, and quickens the sight. Aqua Mel-

lis used alone, is good to take away all blemishes from the Eyes, if it be uted any time. Sugar Candy dissolved in Celandine, Fennel, or Eye-bright water has the same vertues. Seeds of Clary put into the Eye at Bed-time, cleanses the Eye from filth, so that they often cure an *Albugo* alone. The Compound water of Hony is said to be an absolute Cure, it is thus made, R *Virgin Honey* ℥ij. *Sugar Candy* ℥iiij. tops of Fennel, Flowers of Elder and Eye-bright, A. P. ij. distil in B.M. and drop the water into the Eyes. If these things do no good, you may use stronger, as Galls of Fishes, of the *Uranoscop*, *Pastinaca*, Pike; as also the Galls of the *Patridge*, Cock, Goose, Ox, &c. the juyces of Celandine, Brooklime, Water-Cresses, all which are to be mixed with Honey. If they be yet too sharp, you must allay it with Mucilage of *Tragacanth*, *Fænugreek*, or *Fleawort* seeds drawn with Fennel water. A *Collyrium* of *Lapis Calaminaris*; heat the stone red hot thrice, and twice extinguish it in wine Vinegar; of which take ℥j. Myrrh, burnt lead, Opium, A. ℥ss. Saffron gr. v. burnt brass ℥iiij. Decoction of *Fænugreek* ℥j. the ingredients being poudred, mix them with the Decoction in a marble Mortar. § 7. If withal there be a redness, you may use this following, R *Aloes*, *Agarsek*, A. ℥j. powder them, tye them up in a clout, and steep them in Eye-bright or Fennel water, with which wipe the Eyes morning and evening; it

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powerfully stops defluxions, strengthens and cleanses.

XX. *ῥροχμα*, *Cataracta*, a Suffusion.

§ 1. The Cure is directed, first by evacuating the Antecedent cause chiefly by purging Plegmagogues, especially with Hieræ, and the Elect. Diacarthamus, the body being first prepared: Secondly by Revulsion of the matter by Cupping Glasses, Veficatories, Ligatures, Frictions, Seron, Issues, &c. Thirdly by Derivation of the conjunct cause or matter by Apophlegmatisms, Errhines, Sternutatories, and such like, for which purpose the *pulvis sternutatorius Deckerj*, used with caution is most excellent. Fourthly, by Discussion of the said matter by Topicks: for which end this of *Bovius* is of good use. R Gall of a Cock ℥iv: Blood of a Mouse ℥iiss: with Breast milk q.s. make a Collyrium: Or the Water distilled from mans dung mixt with the Gall of a Hare, Sugar Candy, and the Magistery or Salt of Pearls. § 2. These Intentions where they are the same with those in a Gutta Serena, ought to be performed with the same remedies: as to purgation, revulsion, derivation, discussion, strengthening of the Head and Eyes, Diet, &c. so that we shall not here again direct the same things in vain: and therefore in the foregoing intentions, having used the Method which was laid down in the Cure of an Amaurosis or Gutta Serena; we shall now direct you to those Medicaments which being applied as Topicks, are designed for taking away the matter about the Pupilla. Yet Galen

6. *ῥατὰ τῶν οὐσῶν*, was of opinion, that Topical Medicines were of little worth, for there he saith, they promise more than they can perform. But experience has told us (notwithstanding all that Galen has said to the contrary,) that Cataracts in the beginning (universals being premised) have often times been cured by topical Remedies. § 3. First begin with mild dissolvers, (but such as dry not over much:) afterwards mix with them Emollients to hinder hardening, & make the dissolution the more easy. R leaves of Rue, Fennel, Eybright, Celandine, A.Mj. Fœnugreek-seeds ℥j. Camomil and Melilot flowers, A.Pj. Spring Water ℔iij. white Wine ℔j. boyl and make a Decoction: strain, and therewith Morning and Evening with a soft sponge foment the Eyes: of the same Decoction make a Fumigation to be received into the Eyes: but in beginning while the defluxion is recent, use only repellers, for by their astriction, they not only hinder the defluxion, but discuss and dissolve, for which cause we advise continually to wash the Eyes with red Wine. In the Progress of the Disease apply this Cataplasms, R Fœnugreek seed beaten ℥j. Aloes ℥ss. Saffron ℥j. all being in fine powder, make a pulvis with Infusion of Crocus Metallorum in white Wine, which apply to the Eyes at Night: often wash or foment with Infusion of Crocus Metallorum in white Wine, at least three or four times a day: Some commend Pigeons Blood put hot into the Eyes: Or white Wine and juyce of Celandine mixt with

with Hony, and injected warm. *Hallerius* cured one that was blind nine years with this Water. *R* Juices of *Smalge*, *Vervain*, *Germander*, *Burnet*, *Avens*, *Sage*, *Celandine*, *Rue*, *Knograss*, and *Chickweed*; the powder of *Cloves*, *A* ʒj. *gross pepper*, *Nutmegs*, *Xylaloes*, *A* ʒiij. steep all in the Urine of a Boy mixe with a sixth part of Sack: boyl a little, and strain out by pressing; of this drop every night into the Eyes. *Barbet* commends this: *R* *Tragacanth* ʒij which dissolve in *Eye-bright* water, and add burnt *Alum* ʒj. mix and make a *Collyrium*. The juice of *Brooklime* only being often dropt into the Eyes has sometime cured a young suffusion, a *Cautery* being also applied to the *Coronal Suture*. The *Water of Endive* and *succory flowers* is inferiour to very few things. *Riversius* commends this, *R* *Honey* ʒij. roots of *Fennel*, of long and round *Birthwort*, *A* ʒij. leaves of *Eye-bright*, *Rue*, *Celandine*, *Fennel*, *A* Mvj. Centory the less M.ijj. *Roses* M.j. *Urine* of a Boy ʒiij. mix S.A. and distil in a glass B.M. of which Water drop often into the Eyes. Another *Collyrium* of *Barbet*. *R* *Celandine* water ʒjss: white Wine ʒss. S.V. ʒij. Tutia prepared ʒj. *Camphir*, *White Viteriol*, *Glass* of *Ancimony*, *A* gr.vj. sugar Candy ʒijss. mix them. Or this of the same *Barbet*. *R* *Ox Gall* ʒiijj. Juices of *Eye-bright*, *Fennel*, and *Celandine*, *A* ʒij. *Hens Gall* ʒi. Juices of *Rue* and *Marjoram*, *Sarcocol*, *A* ʒss. *Aloes*, *Red Myrrh*, *A* ʒij. *Camphir* ʒij. mix, and distil in a Glass B.M. A water of

Rosmary Flowers which does discufs films in the Eyes. *R* *Rosmary flowers* ʒij. Juices of *Celandine* and *Brooklime*, *A* ʒij. white Wine ʒss. distil in a glais B.M. with which water wash the Eyes, morning, noon and night. Another from *Bread*, which *Zeacchus* affirms, being dropt into the Eyes doth wonders. Make *Bread of Wheat* with a third part of powder of *Rue*, *Celandine*, *Eye-bright*, *Betony* and *Fennel* adding a proportion of *Honey*: when it is drawn out of the Oven cut it in pieces and put it between two pewter dishes, so will a Water come from it, which you are to use; but experience has told us, that the water drawn from it in B.M. is much better. An Experiment of the same *Zeacchus*: *R* clarified Juices of violet Leaves ʒij. of *Fennel* ʒj. *Radish seed* ʒj. *Ammoniacum* ʒss. powder the seeds and mix them, to which add *Fennel* water ʒij. boyl a little, strain, and mix therewith *Balsam of Peru* ʒij. this he saith dropt into the Eyes, Morning and Evening (after due purging) does so cleanse the Eyes, that it takes away the *Cataract* wonderfully without couching: but he that makes it up will have work enough of it. The Juices of *Celandine* and *Calcitripe* equally mixed are of admirable use. *Quercetans* water is very powerful, and yet has this excellency above other Medicines, that it cleanseth strongly without any sharpness: it is thus made, *R* *Celandine* water ʒvj. *Crocus Metalorum* ʒj. digest them: drop. gut. iij or iv of it warm into the Eye four or five times a day for three or

four monthes together. This is much commended by *Fonseca*, By many Swallows, beat them with their Feathers in a mortar, to every pound of them put white Wine ℥iij. Crums of bread ℥iij. digest a Week, then distil in a Glass B.M. to dryness: put this water into a Glasse, stop it close, and digest it in the Sun or a gentle Sand-heat for twenty daies: then drop it into the Eyes Morning and Evening. § 4. If after all you can doe, nothing will prevail, you must come to the Chyrurgick operations, the way of doing which we have already taught in cap. 17. sect. II. *asoregoing*, to which I refer you. § 5. The Cure (if it be possible) being done whether by Medicines, or by manual Operation: you must even then continue giving things to strengthen the Stomach and Head, for a long time after, because there is great fear of a relapse: as also you must allow the usual purging, and have Issues continually running for diversion, washing the Eyes every day with some strengthening and discutient Ophthalmick: for the Eyes have been much weakned by a long Disease, and are very ready to receive any defluxion from the Brain. Pulv. diambra, conserves of Marjoram, Rosemary, Betony, and Conserva Cephalica, are here of good use; so also the Powers of Oranges and Limons. And farther to preserve the Sight, Spectacles of a green or sky colour, are of singular use, for that they comfort and refresh it very much. § 6. Lastly we think good to give you the Opinion of *Fonseca*, when the Disease is as it were desperate,

which is by anointing with Ointment of Quick-silver, for by it the Head may be so purged that a Cataract may be cured: and *Skenkius*, lib. I. obser. 309. confirms it by an Observation. One (saith he) before he had the French Pox was Blind of one Eye with a Cataract or thick Suffusion: by the Uction of Quick-silver, he was freed wonderfully from his Pox and Cataract both at once, and it is reasonable that a Cataract should be dissolved by this means, since the Uction of Quick-silver does powerfully dissolve very hard Tumors of thick and gross Flegm.

XXI. *Kōwōis*, Surditas, gravis auditus: Deafness and slow hearing.

§ 1. Deafness and thicknes of hearing called in Greek Hypochochosis, and Barucoia are almost the same thing, only a difference in degree, and therefore they both of them admit of one and the same Method of Cure. § 2. That Deafness which depends upon any Disease of the Brain, requires no other cure, than what belongs to such Diseases, which you must seek out in their respective places. If it comes from an hard and cold Tumor, it admits of no Cure, but if it be hot, seek for it where we treat of pain of the Ears.

§ 3. The first Indication of Cure is to evacuate the Antecedent cause, by Cephalick Pills, purging Apozems, and Tinctures, such as we have enumerated in an Amaurosis. § 4. The second Indication requires resolution by Cauteries, Vesicatories, Issues, the Seton, Sweating, &c. that the defluxion may be re-
led.

lect. § 5. The third Indication requires derivation by Apoplegmatisms, Gargarisms, and Mastick-urges: which last are peculiarly necessary in this Disease, by reason of the Passage which comes from Internal Ear to the Pallate, and casts out the Excrements of the Ear. § 6. The fourth Indication requires a discussion of the conjoynd cause, for thereby the humors fixed in the Ears are dissolved, and the Brain dried and strengthened. Penotus saith, Nothing is more prevalent in the Cure of Deafness after the use of an hundred Medicines, than (after universal Evacuations) for the Patient to wash his Head well in Brimstone Baths: put upon the Head of the Sick a Cap reaching to his Eye-lids, and beneath his Ears, made of sponges sewed together, and let him so sit in the Bath, that it may fall from a Cock or Spout upon his Head for two hours space twice a day: the sponge Cap keeping it self full of water, will keep the Head in a continual heat: so will the matter compacted in the Nerves and passages of hearing breath away, or be so changed, that the Deafness will quickly be gone: immediately after which let the Sick betake himself to his Bed, and there Sweat: To the Ear it self apply hot Bread moistned with S.V. the Ear being first fomented with warm S.V. and sponges: The Porestates Rosmarini, Cinnamomi, and of Cloves are admirable in this case, provided they go not simply into the Ear. So also a fumigation

of S.V. or the porestates *Aurantiarum* received into the Ear by a Funnel, is of great force, because the Vapors arising from those Powers reach into the innermost parts of the Ear, and discuss and dissolve wonderfully: but the Porestates *Succini*, and Oyl of Amber are thought to be beyond all things: the Porestate *Succini* may be received into the Ear by fume, the Oyl may be dropt in being first mixt with an equal quantity of Oyl of Almonds. Oyls and powers of *Caraway-seeds*, *Bay-berries*, *Juniper-berries*, *Nutmegs*, *Sassafras*, and *Rhodium* have the same effect, chiefly the last. If you would have the fumes stronger you may before hand infuse in the power you intend to use a little *Colocynthis* and roots of *White Hellebor*. The fume being over, drop into the Ear the former mixture of Oyl of Amber, or this: R of any of the asorenamed Chymical Oyl's ʒj. Oyl of Scorpions, fat of an Eel, Gall of a Partridge, A ʒviij. mix them to be dropt into the Ear. Very good also for this purpose are the juyce of Radishes: fat of a Mole, Serpent, juyce of an Onion soaked in S.V. and roasted: essence of a Mans or Oxes Gall; Gall of a Partridge mixed with Oyl of Amber: boys Urine; water of an Ash-bick green, made by putting one end into the fire, and taking the water which drops at the other end, which may be used either alone or with S.V. Goats Gall mixed with Honey, and S.V. is an approved thing; so the fat dripping of a roasted Eel. *Zechius* saith; That Ants Eggs

Eggs mixt with the *Juyce of an Onion*, and dropt into the Ear do cure the oldest Deafness: so also the *Blood of a young Wolf* dropt hot in: Or *Clarified juyce of Ivy* mixed with strong white Wine: Or *S.V.* wherein *White Hellebor* has been infused, being dropt into the deaf Ear: Or the water of *Ash-sticks* mixt with equal parts of *juyces of Sow-bread, Squils, and Rue*, and dropt warm into the well Ear: but inferior to none of the former things is *Spiritus Otalgicus*, the making of which you may see in *Our Pharm. lib. 4. cap. 2. sect. 11.* But if the Disease be so stubborn that none of the former things will do, *Fonsæca Tom. 2. consult. 58.* will have the last remedy to be an *Unction with Quick-silver*: because when Deafness comes of the French Pox, it is so cured, and so he thinks it may be when it comes otherwise, now herein the Artist ought to be advised and cautious, lest he should hurt the Brain, but some Physicians think that Quick-silver after due purging no ways injures that part. § 7. The fifth Indication requires the removal of those things which stop up the Cavity of the Ear, which is done by injecting alternately Oyl of bitter Almonds and *S.V.* into it, repeating this twice a day for some days till the offending matter is loosened and brought out, which in some Patients has been cause of wonder: afterwards use some of the aforesaid things to comfort and strengthen the Auditory Nerve. § 8. The sixth Indication requires a proper stopping the

Ear, which let be with Cotton which Musk gr. ij or iij is put, to this by a Specifick property cures Deafness alone, as *Forrestus, lib. 12. Obser. 15.* does testify. § 9. The seventh and last Indication requires a fit Diet, which let be the same in all respects as We directed in the Cure of an Amaurosis.

XXII. *Odyntalzia*, *Odonalgia*, *Dolor Dentium*, the Tooth-ach.

§ 1. There is commonly six several Indications of this Cure, The first is the mitigation of the pain, which is done with Anodyns simple, and sometimes mixt with Repellers. R *S.V. flj. Snake-weed roots, Tormentil and Plantane, leaves of Ivy, Vervain, Cypress-nuts, Balaustians, Galls, Acorn cups, A. ʒijss.* extract a strong Tincture, which hold in the Mouth against the pained Tooth. Vinegar mixt with Rose-water is good. So also a Decoction of Galls and Balaustians in Vinegar: Or a decoction of Cinkfoyl roots, and Willow leaves in Red Wine: with these wash also the side of the Cheek, Temples, and places adjacent. § 2. But if the pain be very great and Anodyns will do no good, you must come to the use of Narcoticks. R *Milk ʒviij. juyces of Houfleeck and Nightshade, A. ʒij. Oyl of Roses Omphacine ʒijss.* mixt with Oyl of Tarrar per deliquium ʒj. Opium ʒss. Saffron ʒi. mix, and apply it warm with a sponge to the jaw of the same side. Or this. R *pulp of rotten Apples, bread steeped in Vinegar, A. ʒij. Oyl of Roses ʒj. Strong Tincture of Opium ʒij. Saffron ʒi.* mix

ix for a Cataplasm. Or this.
 Barly Meal \mathfrak{z} ij. juyce of Hou-
 seek \mathfrak{z} ij. Oyl of Roses \mathfrak{z} j. Tincture
 of Opium, Camphir in powder, A.
 \mathfrak{z} j. mix for a Cataplasm, and ap-
 ply it warm to the part. To hold
 in the Mouth a decoction of Ver-
 pain with a few grains of Opium.
 Or, this is good. \mathfrak{R} Opium, Saffron,
 \mathfrak{g} r. ij. tye them up in a bit of silk,
 and hold it between the Teeth :
 Or hold Vinegar in the Mouth
 in which Opium has been dissol-
 ved. Or Camphir dissolved in
 rectified S V. Or this. \mathfrak{R} white
 Wine \mathfrak{z} iv. white Henbane root \mathfrak{z} ij.
 Vinegar \mathfrak{z} j. Sindarach \mathfrak{z} js. boyl a
 little, and wash the Mouth often
 therewith. Or this ; \mathfrak{R} bark of
 Hen-bane roots, Arsmart, A. de-
 coct them in Rose Vinegar. Or If
 it be from a hot cause, boyl only
 a Hen-bane root in Vinegar ; but
 you may use the leaves if you
 please instead of the root. Our
Spiritus Anodymus is a thing which
 has scarcely its equal. Decoction
 of Henbane leaves and *persicaria*
maculata in Vinegar, is taken as
 a secret magnetick charm, for
 as soon as the Teeth are wash-
 ed with it the pain will be gone.
 If the Tooth be hollow stop it
 with a grain or two of *Liuda-*
num. After due purging an o-
 piat Masticatorv may be of use ;
 as, \mathfrak{R} Mastich, Pyrethrum, Staphu-
 agria, A. \mathfrak{z} j. Henbane seeds \mathfrak{z} fs. O-
 pium \mathfrak{g} r. vj. powder, mix, and tye
 it up in a linnen rag. For a hol-
 low Tooth take this ; \mathfrak{R} Opium
 Myrrh, Labdanum, A. \mathfrak{z} j. beat them
 into powder, and with Vinegar boyl
 them to a thickness which with
 wine put into the Tooth. This Em-
 plaster applied to the Temples

and Jaw is good : \mathfrak{R} Labdanum,
 Olibanum, Hypocistn, A. \mathfrak{z} js. Pitch,
 Mastich, A. \mathfrak{z} j. Opium Div. Oyl of
 Mastich, q. s. mix them, and apply
 it to the Arteries and part affect-
 ed with pain : but the expressed
 Oyls of Henbane and Poppy-
 seeds is better than that of Ma-
 stich. § 3. The second Intensi-
 on is by repulsion and interception
 of the humor : for which purpose
 you may use the Shop Emplaster of
 Mastich, or of Gum Elemi, Tach-
 camahacca, &c. thoroughly warm-
 ed, and applied to the Temples.
 \mathfrak{R} whites of Eggs N^o. ij. beat them
 with Rose water, and dip stuphs
 therein, sprinkled with two
 drams of Pepper, which apply to
 the pained side over the whole
 Cheek. But observe that you
 apply not astrigents to the Jaws
 if they be swoln. least the humor
 being repelled, fall down to the
 Throat and Choak the Sick. *Va-*
leus Taranta saith, a Physician in
 this applied but Oyl of Roses
 with Vinegar, to his own Jaws,
 and it brought him into a Quin-
 sy of which he died. § 4. The
 third Indication requires evacua-
 tion, which is to be done, while the
 second is in Action. Let the sick
 purge every other day for a week,
 with a Medicament proper for the
 humor, which if it be in the form
 of a Potion it may do best : after
 which if the pain continue apply
 Cups to the Shoulders with
 Scarification, or a great one be-
 tween the Shoulders without :
 Or a Vesicatory to the Neck, or
 behind the Ears, for they draw
 back the humors violently. § 5.
 The fourth Indication is by Discus-
 sion, which may be done with Em-
 plastrum

plastrum de Melliloro Compound, de Galbano Crocatum Mynsichti, or Foreitus his Cerat of Ammoniackum. Or this. *℞* fresh Butter, Hens-grease, A. $\frac{3}{4}$ j. powder of Orrice root $\frac{3}{4}$ j. Saffron $\frac{3}{4}$ j. Oyl of Camomil $\frac{3}{4}$ j. mix and make a Liniment; but a Cataplasm of Figs, Bread, and Vinegar, is better. § 6. The fifth Intention requires the Application of such things as Act by a Specifick property, and also strengthen the part. Sp. of Sal Armoniack in a proper Vehicle, is wonderful in all Cases: so also (as a chief thing) the Tooth of a dead Dog, calcined, made into a Body with Posset drink and applyed: Or a Sorrel root (taken up before it Blossoms) put to the pained Tooth: Or Gum Hedera hold between, or put into the hollownesse. Some commend Seneca Serpentis boyled in Vinegar: Or a Decoction of Guaiacum in Wine or Water with a little Salt. Amatus Lusitanus very much commends this, *℞* Sandarach $\frac{3}{4}$ j. Wine and Vinegar A. ffs. boyl, strain, and hold the liquor long in the Mouth. Decoction of the great Nettle root with Nutmeg and Saffron in equal parts of Vinegar and Wine, wonderfully draws the humors forth if held warm in the Mouth. Oyl of Cloves upon Lint eases the pain presently: if the Tooth be hollow stop it in: and Oyl of camphir in like manner is good for the same purpose. Or this. *℞* Oyl of cloves $\frac{3}{4}$ j. camphir gr. viij. dissolve and use it as aforesaid. But above all Oyl of Fox is extolled, which being but once dropt into the Tooth pre-

sently stales the pain; so also O of Hazle wood, used in the same manner. Sal prunella put into the mouth and held by the aking Tooth seems to do Wonders. Juyce of Plantane, or a Plantane root, or Oyl of bitter Almonds or Vinegar put into the Ear on the same side, or the same thereof received by a Funnel, if the pain comes from a hot cause: Or a Clove of Garlick peeled, or the juyce thereof with Treacle, put into the Ear, if the pain comes from a hot cause, do mightily stay the defluxion, and ease the dolor immediately, for that several small Veins which convey nourishment to the Teeth, run along by the Ears. Galls boyled in Vinegar to wash the Teeth with, have been found very good. § 7. The sixth Indication requires burning with an Actual Cautey. This is to be done if all other remedies fail, and the Tooth be hollow to the Nerve: let the Nerve be toucht with an Actual Cautey or with Oyl of Vitriol. § 8. If the pain still continues, you must be necessitated to draw the Tooth out: but do it not whilst the defluxion is violent, or the Head akes, or the Gums swell, or the pain is extreame when it is drawn out, close the part with your Fingers, and wash the mouth with warm Oxycrate, bidding the Sick to beware of taking cold. If there is a Flux of Blood withal, lay a bit of Lint like a Ball upon the place, and let the sick hold it down with his fingers for an hour or two: if this does not do, you must apply burnt Vitriol to the place, upon which

lay a rag, and hold it to till it makes an Escar: but the last remedy is an actual Cautery, for that stops the blood presently.

§ 9. *If there be Worms in the Teeth (which cause great pain) kill them with things bitter.* R. Aloes, Elixir of Wormwood, A. 5j. Camphir gr. x. mix and apply them.

§ 10. *Lastly, Physicians tell us of Remedies which will cause the Teeth to drop out, by rubbing them therewith: as the powder of Earthworms: roots of Pyrethrum steeped in Vinegar: root of the wild Cucumber so steeped: Bark of the Mulberry root: a paste made of Milk, Spurge and powder of Frankincense mixed with a little starch: but the best of all is the leaf of Elleboraster rubb'd upon the Tooth it self; but take heed of touching the other, lest they fall out also: I advise you to defend them with soft Wax.*

XXIII. *Αιμορραγία, Hemorrhagia, bleeding at Nose.*

§ 1. *In the Cure of this Disease there are five several Intentions, to wit, Revulsion, Interception, Repercussion, Refrigeration of the Blood; and a proper Diet.* § 2. *First, Revulsion, the common Physicians perform it by bleeding the Median vein on the same side that the Bleeding Nostril is of: but it is well performed by Cupping both with and without Scarification according to the part: you may apply them to the Shoulders, Back, Nape of the Neck, the Regions of the Liver and Spleen, both Hypochondries; and Forrestus commends them to be applied to the Soles of the feet, by which great bleedings have been stopped beyond*

all expectation, as it were by Miracle or Incantment. Frictions of the extreame parts are of singular good use. Crato accounts the bending of the little finger on the same side among the Revulsive helps, for by the great pain it will cause, there will be a drawing back of the Blood. § 3. *The Second Intention is Interception. This is done by bathing the Neck with cold water or Vinegar, or laying Cloths or spunges dipt therein, thereto, often changing them before they grow warm or by laying a piece of Lead or cold Iron to the Nape: let the extreame parts, as the Arms or Wrists and Legs be tyed hard: and apply to the Cods and Hypogastrium, a four times doubled Linnen Cloth wet in cold water or Vinegar.* § 4. *The third Intention is Repercussion. You must sling hastily (unawares to the Sick) a Glass of cold water in their face, which you must repeat five or six times; and then apply Anacolemata to the forehead, such as we have described in our Pharm. lib. 5. cap. 7. sect. 13 14. The Powder Thuraloes with the white of an Egg is good: Or, in extremity a Cataplasm of fine Bole, the white of an Egg and Vinegar. Riverius commends a Cataplasm of Time and Vinegar to be laid on the Temples and forehead two fingers thickness, which he saith will certainly cure: Or, foment the Temples and Forehead with cold water or Vinegar, changing the Cloths as they grow hot: the same effect has the cold juyces of Plantane, Knot grass, Sorrel, Horserail, Shepherds Purse, Lettice, Purslane mixt with Vinegar.*

Vinegar alone to smell to, and to foment the forehead which has cured many: you may smell to it with a Sponge. *Vinegar and Water* syringed up the Nostrils is of great efficacy. *The fumes of Horns and Hair, or Feathers* are of good use. *Bread dipt in Vinegar* and applyed to the forehead is prevalent; so also *Vinegar* drunk and held in the mouth. A Bean bound to the root of the Nose, with a proper Cataplasm over it is a special Remedy; Or, the fume of *Vinegar* from a red hot Iron. *Thuraloes* mixt with a quarter part of Cobwebs is an approved thing. § 5. *Into the cavity of the Nose you must put proper Specificks repercussive, and such as may close and glutinate the Veins,* for this purpose we commend the former *Thuraloes* with Cobwebs to be blown in, or strewed upon a Tent and so put in: but in blowing any thing into the Nose, be sure to fill the mouth with cold water, that the Medicine may not get into the mouth, let the sick smell to a dryed Toad, or to *Spiders* tyed up in a Rag, being a little bruised. The powder of *Toads* blowed up the Nostrils is of Marvellous force; so also Tents formed and dipt therein and put up: fine Flax or Lint dipt in Ink and put up the Nostrils is good, which may be also applied to the forehead: The *Juyce of Nettles* is said to stop bleeding in any part whatsoever; let it be Syringed up the Nostrils, applyed in a Cataplasm to the forehead, and taken inwardly to ℥iv. at a time, twice. *Hogs-dung* is one of the best of

Specificks, (setting *Toads* aside) if it be applyed hot to the Forehead and Temples; Or smelt to Or put dry into the Nose. *Assedung* is said to be a singular Specifick, to be used as *Hogs dung*, but *Zacutus* gave it inwardly finely poudred in all their Drink and Broth. Powder of *Sheeps or Oxes Blood* dryed, but principally of mans Blood stops an *Hæmorrhage* by a Specifick quality, being blown up the Nostrils, or put up being strewed upon a Tent. *Spicknard* in fine powder given to ℥j in Broth or some proper Vehicle, cures not only by a Specifick force, but also by strengthening the Liver. *Finkius* saith, That the powder of a dry Toad put into a fine red Sarsener, and held in the hand till it grows warm, or laid under the Arm holes, will staunch the Blood instantly; the same thing is done by the bare *Thigh bone of a Toad* put up the bleeding Nostril: Upon the Crown of the head being shaved apply *Sticticum Paracelsi*: *Quercetan* commends this, R fine powder of *Crocus Martis* and *Crocus Veneris A.* which mix with Oyl of bitter Almonds: Others apply Frogspawn water with Camphir, and *Saccharum Saturni* about the Neck: Or, Potters fine Clay, or Tobacco pipe Clay made into a Pultise with Vinegar: Or, the *Fungus betulinus* (the Mushroom of the Beech tree) put up the Nostrils: Or, the root of Nettles or of white Succory, which are to be chewed between the Teeth. But this following we have had experience of, R powder of *Toads*, of mans Blood, of Cobwebs

webs, of Swines and of Asses dung; ℞ ℥ss. inspissate juyce of Nettles ℥ij. mix and make a fine powder. § 6. If the bleeding still continues, you must come to the use of Causticks which are to be warily used, because when the Eschar falls off they may bleed again: Burnt Vitriol is said to be best, which besides its Caustick property is good to stanch Blood: ℞ fine Bole, Sanguis Draconis, Frankincense, Aloes, Tyme, Vitriol burnt, Sarcocol, Mastich, A. ℥j. make a powder: Or ℞ Galls, ℥ss. Alum ℥iv. mix and Calcine: blow either of these pouders up the Nose. White Vitriol is more gentle than burnt Vitriol, and stays bleeding very powerfully by attringing the Orifice of the Veins, if put into the Nose with a Tent. § 7. When nothing else will prevail, so that the Case seems desperate, you must come to the use of Narcoticks, which instantly and certainly stop all fluxes and motion of humors; among all which Laudanum in gr. iij. or jv. is truly the best. Syrup of Poppies in an Astringent Julep at night will do the same. Spertiola compositum of Crolius is said to be a famous thing, given ad gr. iij. or jv. Crocus Martis mixt with juyce of Quinces and Laudanum; or the Extract of Crocus Martis so mixt, or with Syrup of Coral in a Chalybeat water. § 8. The fourth Intention is done by refrigerating of the Blood, first by some proper cooling Julep or Liquor. ℞ Plantane water ℥iij. Aqua Alexipharmica, Julep of Roses, A. ℥j. Cinnamon water ℥ss. Confect of Hyacinths ℥j. Sanguis Draconis,

Lapis Hematidis, A. ℥j. Spirit of Vitriol gut. viij. Laudanum gr. iij. or iv. mix, and give a spoonfull now and then. Or this, ℞ Lapis Prunellæ ℥ss. Plantane water ℥vj. Syrup of Quinces ℥ij. mix for three Doses. Tincture of Roses is here singular, and all the things for the cure of a hot Liver. Vinegar and Water called Oxycrate being drunk plentifully stays an Hemorrhage. § 9. Secondly, by evacuating the cause, which is a salt, thin, and watery Chollerick humor. ℞ pulp of Tamarinds ℥ss. Plantane leaves M. j. fair water ℥ss. boyle to ℥jv. strain and infuse therein Rhubarb ℥j. yellow Myrobalans ℥ss. Spicknard ℥ss. strain and mix therewith Syrup of Roses ℥j. powder of Rhubarb ℥j. give it for one Dose: if the Disease is old, and returns often, let this be repeated once every week. In the intermediate days give Syrup of the juyce of Nettles ℥j. every morning fasting, and cast into the Nostrills with a Syringe Aqua Stryptica. § 10. The fifth and last Intention is a fit and proper Diet. Let the Air where the Sick is be cool, his meat thickening, as Calves, Sheeps and Neats feet, Rice, new fat Cheese, hard Eggs; fruits sharp, bitter and binding, as Pears, Quinces, Medlars, Services, Olives, Limons, Oranges, Pomgranates, Sorrel, Pease, Beans and such like; Let him abstain from Wine, Flesh and Rear eggs: let him drink Barley broth, Flesh broth and Panado: but forbear all things which require chewing; let him rest as much as may be, not Walking, Coughing or Talking.

but

but sleeping as much as he can: and lastly, let him drink steeled water, in which also his Meat ought to be boyled.

XXIV. Κατάρρῳ, Catarrhus, Distillation of Rheum from the head.

§ 1. We shall consider the cure of this Disease according to the variety of the principal causes, and first when it proceeds from a cold and moist humor, where observe if it be thin and watery, you ought first to prepare it by such things as incrassate or thicken, as the Decoction of Frankincense, of Mastich, of Betony and Nutmeg; and other things mentioned in the Cure of the cold Distemper of the Brain. § 2. The matter offending is to be diminished either with Pills as of Rudijs, Holagogæ, or ex duobus: Or, with Lotions, as the Tinctures of Mechoacan, Agarick and Colocynthis, Gruliny, &c. If the Catarrh be very strong, you must give Decoction or Tincture of Colocynthis, for that powerfully roots out the matter, and is an excellent thing in all cold Diseases of the head: these purges may be taken once or twice a week, but in the intervals you must not neglect strengthening Medicines. § 3. If the humor be thick you must prepare it with Decoction of Hyssop, Rue, Oxymel simplex and Scyllitick after which you may purge with Agarick and Pilulæ Cochiae. § 4. The next thing to be done, is to call away the matter by Revulsion, that new humors may not have occure to augment it, and this is done by Cupping, Blistering, Cauterizing and making Issues,

which Zacutus in *Prax. lib. 2. Ob.* 160, commends as the best remedies being made behind the ears. § 5. You must now come to derivation by Masticatories, Gargarisms, Sneezings and Errhines: the first two are to be used when the Catarrh falls into the Eyes and Nose: Sneezings and Errhines when it falls upon the Jaws, Lungs and Stomach. A Masticatory. R Mastich, Gum Arabick, Nutmeg, Mace, A. ʒi. Rosewater q.s. make Troches to chew. Extract of Nicotiana made with S.V. held under the Tongue in the bigness of a Pea brings forth much water, but beware of swallowing down. A Sternutatory. R black Hellebor, make it into fine powder, and mix it with fine Sugar equal parts. An Errhine: R Marjoram water ʒiv. juyces of Betony, Primroses, A. ʒj. Gish seed poudred ʒss. Nutmeg ʒj. Musk gr. iij. mix them. § 6. The last thing which you have to do, is to dry and strengthen the Brain with Specificks. To the shaved Crown of the head, being first anointed with Oyl of Amber, apply this Paste. R flowers of Sulphur, prepared Amber, moistened with Oyl of Amber and with Honey q.s. make a Past and apply it. Or anoint the Nostrils and Head with Balsamum Apoplesticum Horstij, or with that of Myrsicht: A Cataplasim of Leaven by some is commended: the fumes of Tacamahacca also dry a Catarrh admirably. § 7. Inwardly, you may give the Powers of Rosemary, Oranges, Limons, Caraway, Cloves, Nutmegs, &c. in some Sudorifick Decoction as of Sarsa, Guajacum

ajacum. Sc. Confectio Anacard. are excellent in a morning fasting. *Solenander* commends this: *R Frankincense, juyce of Liquorice, A. ʒj. Myrrh, Opium, Saffron, A. ʒj. with Syrup of Poppies make Pills. Dose ʒls. or ʒij.* Balsam of Sulphur is of known use and approved; and some commend *Lac Sulphuris* as little infectious. *Syrupus Hemoptoticus* in *Aqua papaveris* is of good use, so also our *Conf. Etio Anodyna*, or *Laudanum* dissolved and taken in Sack, at Night going to Bed. The *Elixir Proprietatis*, and the Tinctures of Coral and Pearl have their place here. In a recent Catarrh water of Nuts given three nights together in *Hydromel*, is an experienced thing. But if all these things prove vain, you must use others dedicated to a cold Distemper of the head, among which are Volatile Salt and Spirit of Sal Armoniac. § 8. When the Catarrh proceeds from a hot humor, you must evacuate the matter offending, thicken and revell it; lastly, correct the distemper of the parts and strengthen them. § 9. First, evacuate with *Rhubarb, Citrine Myrobolans*, and other Choleric purgers, being first prepared with cooling Cephalicks. § 10. Secondly, thicken the matter with *Diacodium*, Syrops of Poppies, Lettice, Purslane; and other cooling things, as an emulsion of the 4 greater cold Seeds; after which you may purge again with *Sena, Catholicon* or *Diaprunum*. This thickens the humors. *R Plantane or Poppy water ʒvj. Yolks of new laid eggs No. ij. fine Sugar*

ʒj. take it morning and evening. But *Pilule Bechice* are yet stronger, so also the *Pil. Narcotice Plateri*. *Trochiscs de Berberis* and of *Camphir* are much commended for the same purpose. *Laudanum* is of admirable use, and truly exceeds all other things; or instead thereof Syrup of Poppies; these truly do wonders in the beginning of the Disease. Some give *Sal Prunelle* in a proper Juleb, or with Almond Milk in Barly water. § 11. Thirdly, Make Revulsion as we have taught at § 4. foregoing. § 12. Fourthly, you must correct the distemper of the parts, by giving such things as cool the hot distemper of the Liver, for which purpose we commend the Oyls of Salt, Sulphur and Vitriol, given a few drops at a time in all the Liquor that the Sick drinks; these Oyls alone given in a proper Vehiculum, oftentimes cure the strongest Catarrh, chiefly those which come from inflammation of the Bowels: for they go with the drink or liquor through all the Veins, and hinder the motion of the humors. § 13. If the Catarrh be violent, and rushes down with force, besides all the former intentions, you must use Interception by Medicines which stop the flux, and incrassate the thin humor, which administer about Bed time, without waiting for the Concoction thereof; such are new made Mithridate and Treacle, fine Bole, Mans Skull burnt, *Laudanum, Pilule de Cynoglossa, Asajereth*, and Pills Arabick; Or this. *R Storax Calamite, juyce of Liquorice, Frankincense, Opium,*

T t A. ʒls

A. 3ls. Saffron ʒi. Poppy seed, Rhubarb A. ʒij. make Pills. If the humor be Salt, you may add Spicknard. If the Sick be Asthmatical avoid all odoriferous Suffumigations. § 14. If the Catarrh be suffocative, flowing with greater violence to the Lungs and Heart, with all speed use Revulsion by Clysters, Frictions, attractive Emplasters to the coronal suture, Suffumigations, and injunctiōns of Oyl of Amber to the Nostrils; but in this case there is not a more present remedy known than a Vomit, because it casts forth whatsoever is stuffed and impacted in the Brōchia of the Lungs. § 15. Lastly, Those that find themselves more liable and subject to frequent Catarrhs, ought every month a little before the New of the Moon, gently to purge the body, and constantly use the Wine of Pope Adrian, which is extreamly commended against this Disease. See it in our Doron lib. 2. cap. 12. sect.

XXV. Ruddy Xn, Angina, Cyananche, the Quinsy.

§ 1. *The Cure of a Quinsy is to be ordered according to the Method and Indications of all other Inflammations in general; but in particular we have these following Observations, First, That although Blood-letting be prescribed by almost all Physicians, and that to all sorts of persons without any discrimination, yet some (and they very Learned men) have deservedly questioned whether it be a thing at all proper or no: and others think it not to be administred, unless it be in the very beginning of the*

Disease, immediately on the first day after its Invasion: and because this is a most acute Disease, and sometimes kills in one day, we ought to use great remedies with much diligence.

§ 2. *Secondly, The sharpness of the Lympha and Choler in the Blood is to be allayed by a slender, cooling, moistning Diet of Barly Cream, Chickena broth with cool herbs or such like: let him lye with his head high, and his neck upright, that he may the better breathe: things cutting the tough, flegmatic matter are very necessary, by which sometimes the Disease it self is in a short time cured.*

§ 3. *The same day make Revulsion by Vesicatories, Cauterys and with Cupping Glasses both with and without scarrification under the Chin, and upon the shoulders and loyns: wash the feet with hot water, and make frictions and painful Ligatures upon the extreame parts.*

§ 4. *This done, you must have immediate recourse to purging, for this in the very beginning is to be ordained, not expecting the concoction of humors, for there is no parley or cessation to be held with this Disease. Let it be made of gentle things, if the Disease proceeds of Choler, lest the humors should be moved too violently, and so rush to the part affected: Diacassia is commended as a most excellent thing: Trallianus gave Resin of Scammony in Broth: if it comes of Flegm give Agarick and Diaphenicon with Sena; and if it be very strong you may at length give such Medicines as Vomit violently, the best of this kind is the Aqua Be-*
nedicta

medicula Rulandi, which given to ʒij . doth (as *Riverius* saith) Wonders ; for being of no evil tast, it may more easily be taken than other Medicines ; but it ought to be given only to such as are strong ; otherwise you had better often to use Clysters which are sharp, to draw the humor downwards. § 5. For Derivation, the opening the Veins called *Ranulae* under the Tongue is commended by Hippocrates, Galen and other Physicians, by which the Blood which doth immediately cause the Inflammation is drawn away : after this a Vescatory to the Nape of the neck may do well. These things being done we must now come to Topicks.

§ 6. The Inflammation is to be allayed as in other like Tumors, first, by repellers or repercussives inwardly administred to the Jaws in form of a Gargarism. In this case of simple Medicines these are commended, Shells of green Walnuts, Must or New Wine, roots of Althea, Liquorice, Orrice ; Leaves of Comfry, Myrtle tree, Self heal, Dandelion, Plantane, Scabious, Houfleeke, Sage, Ground Ivy, Violets, Columbines, Wood bine, Balaustians, red Roses, Saffron, the 4 greater and lesser cold seeds, Poppy seeds, Pomgranate peels, sharp juyce of Pomgranates, Figs, *Album Græcum*, Swallows burnt and their Nests, burnt Allum, Syrups of Quinces, Citrons, Coral, Barberries, Mulberries, Maiden hair, Violets, Porcelain, Jujubes, Scabious, Coltsfoot, Honey of Roses, juyce of Elder, *Rob Diamori*, Seeds of Mustard, Lovage, Bayberries,

and S.V. are much commended, so also Spirit of Sal Armoniack and of Niter: Spirits of Salt, Sulphur and of Vitriol mixt with water & taken by little & little, not only qualify the part, but being sent through the Liver and Veins wonderfully cool the Blood, and either of these 3 last are also of admirable use in Inflammations of the Jaws and Toncils ; but Sp. of Sal Armoniack has a specifick faculty not only to discuss matter and Blood heaped up, but also to dissolve all sorts of Coagulums and Congelations in any part wheresoever. Now in the use of Repellers you must be cautious, especially if the Disease is malignant, lest the offending matter being drove back, be forced upon the Heart, Lungs or Brain it self, and so cause either the Falling Sickness or else Madness. § 7. Among Compounds these are had in most estimation : A repercussive Gargarism in the beginning of the Disease. ℞ red Roses, Balaustians, A. P. iiij . Pomgranate peels, ʒij . Oak leaves, M. ij . Burnt Alum ʒij . boyl them in Smiths water & strain, and to ʒj ss. add *Rob Diamoron* ʒij . and mix them: Or this : ℞ Planeane and Poppy waters, A. ʒjv . ss. Syrup of Mulberries ʒij . Sal Prunellæ ʒij . mix them: Or this more efficacious: ℞ Dandelion, M. ij . ground Ivy, Violets, A M. ss. boyl in Barly water, strain, and to ʒj . dissolve Honey of Roses ʒij . ad Sp. Vitrioli gut. xvj mix them; this ℞ Plantane, Sorrel, Bramble tops, A. M. j. red Roses P. j. Grains of Sumach ʒss . one Pomgranate peel beaten with its grains, make a

Decoction to a pint: strain and dissolve it in white Vitriol ℥ ss. Syrup of Mulberries ℥iij. Sal prunelle ℥ij. Decker commends this: ℞ Roses, Elder flowers, A. M. j. small Ale q. s. boyl, and towards the end add Album Græcum ℥j. to a Pint of it: Saccharum Saturni ℥ss. Lapis Prunelle ℥ij. mix and dissolve. Or this, ℞ Rose and Elder flower water A. ℥ij. Rob of Elder, Diamoron, A. ℥ij. clear juyce of Dandelion ℥ss. rectified S. V. ℥vj. Lapis Prunelle ℥j. mix them. Here observe that as long as the Inflammation continues, Repellers must be made use of, though joyned with Discussives and Astringents, lest the part which is by nature soft should be more relaxed, and made fit to receive a Defluxion.

§ 8. *In the declination of the Disease you may more boldly use Discussives, such as this: ℞ Pomgrate rinds ℥ij. Spanish juyce of Liquorice ℥ij. Balanstians P. j. Fijubes N°. xij. Figgs N°. iij. Currans ℥vj. boyl in Barley water q. s. strain and in ℥ij. thereof dissolve Syrup of Maiden-hair, strained honey of Roses, A. ℥j ss. mix them. Or this: ℞ roots of Ebulus ℥ss. of Orrice, Liquorice, A. ℥ij flowers of Camomil, red Roses, Hyssop, A. P. ij. Dates, Figgs, N°. v. Fænugreek seed, Album Græcum A. ℥ij. boyl all in Turnep broth: strain, and in ℥ij. dissolve Syrup of Maidenhair, Fijubes and of Althæa of Fernelius, A. ℥j. § 9. Outwardly also Discussives are to be applied to the Throat. The Cataplasma de Nido Hirundinis Mynsichti being often applyed is said to cure a desperate Quinsy:*

the Ashes of burnt Crevites or Crabs mixt with Honey is good: Hens dung mixt with Album Græcum, Or the Cataplasma Resolutivum Forresti, have here place: so also Oyls of Nuts, of white Lillyes, Dill, Camomil, Almonds, Lard, Capons grease, Ung. de Althæa, Empl. of Mucilages. Or this of Barber: ℞ Juyce of Onions ℥ij. Oyls of white Lillies, of Orrice, A. ℥j ss. boyl a little: then add powder of a Swallows nest ℥ss. Pitch. Wax, A. q. s. mix and make a Plaster. § 10. But if the Tumor will not be discissed, but tends to suppuration which uses to be on the 4 or 6 day, it is to be forwarded by keeping a while in the mouth the Pulp of Cassia, and Gargarisms used somewhat more than Blood warm made of Milk and Hony: First ripen the Tumor by some of the former Cataplasms and Plasters: then apply this, ℞ Onions ℥j. Figs N°. xij. roots of Briony, white Lillies, Orrice, A. ℥ss. leaves of Parietary Mj. Camomil flowers M. ss. bruise and boyl a little, adding powder of Linseed, Sour Leaven, Hens dung, Pigeons dung A. ℥ij. Hens grease ℥j. Oyl of Camomil ℥ij. mix them. Take white Wine ℥ij. Spanish juyce of Liquorice ℥ss. dissolve, and mix therewith Mustard seed ℥ij. roots of Pyrethrum ℥j. Saffron ℥j. Oxymel ℥j. and make thereof a Gargarism. § 11. If by this means the Tumor does not forthwith break, you must do your endeavour by putting your fingers into the Throat: if this will not do, the mouth must be opened with the Speculum Oris, and then the Apoptume must be cut with the Inci-

cision Knife or a Lancet, after which let the Sick hold down their head, lest the matter fall upon the Lungs: then wash with Barley water and Honey of Roses, or with *Hydromel*, or with *Osmol*, viz. Honey and Wine; Lastly, dry it with Alum water. Some touch the Aposteme with Oyl of Vitriol which presently breaks it. § 12. Among Specifics, *Fews-ears* boyled and drunk are admirable: so also the *Ashes of Swallows* (salted and calcined in a Crucible,) mixt with Honey and applied to the place. Powder of a Bores Tooth \mathfrak{zj} . mixed with Oyl of sweet Almonds \mathfrak{zss} . and sweetened with Sugar Candy: and lastly the Secret of *Gumizmannus*, mentioned by Hartman. § 13. In a desperate Quinsy you must come to Laryngotomia; for in a desperate Case it is better to use a desperate Remedy than none at all; yet this Operation is not so very dangerous as the vulgar Opinion would have it to be. The way and manner how it is to be performed we have taught cap. 15. sect. 19. foregoing. § 14. Observations. Lanfrank in his great Chyrurg. Doct. 2. Tract. 3. Cap. 5. cured one by Laryngotomia. Skenkius brake the Apostem with Decoction of Agarnick. Douvnerius in his Apology lib. 3. cap. 1. cured a Noble Woman Gabriella Grouser Lady of Saul-ton with Agarick cut and steeped in Decoction of *Althea*, with a quarter part of White wine, Figs, a little Ginger and Syrup of Marsh Mallows, he gave it her to Drink, ordering her not to swallow it down suddenly, but

to hold it in her Mouth a little. And *Aetius lib. 15. cap. 16.* saith, That *Agarick* doth destroy hidden Apostumes and draw them forth. A Country man was cured with the Ashes of an Owl (Feathers and all) blown into the Throat, by which the Aposteme was wonderfully broken. Another was cured with this: \mathfrak{R} Spirit of Sal Niter \mathfrak{zjss} . Spirit of Sale \mathfrak{A} , \mathfrak{zss} . S. V. \mathfrak{zj} . mixt and put into a draught of Water, by which the Inflammation was allayed and the Aposteme resolved. Another was cured with this Gargle. \mathfrak{R} *Lapu prunellæ* \mathfrak{zj} . *Saccharum Saturni*, gr. vij. Sugar candy \mathfrak{zss} . dissolve in spring water \mathfrak{zviij} . and wash therewith.

XXVI. Of the Distemper of the Brain.

§ 1. The Distemper of the Brain is either without or with matter: that without is either from heat, or cold, or dryness, or moisture. § 2. The cure of a hot Distemper. It is performed first by Alteration with cooling Medicines both internal and external such are Lettice, Purslane, Saunders, Flowers of Water-Lillies, Poppies white and red, Roses, and other things made out of these. But let them not be too frequently used, least they introduce a kind of Senslessness and stupidity; and in the declination of the Disease mix them with Discutients, and things that penetrate, as Vinegar, &c. apply them to the Forehead, Temples, and Sutures, and when they begin to grow hot, change them not covering or tying them on. Embrocate and wash the Feet with Hou-

fleck, Vine, Willow and Elder leaves : of which a cold Cataplasm may be made. *Secondly*, by a gentle evacuation with cooling things, as Cassia, Tamarinds, Whey. *Thirdly*, by a cooling Diet, with a moderate drinking of water. § 3. *The Cure of a cold Distemper. It is done first by evacuation if there be a Cacoehymy adjoined. Secondly by Alteration with Heating Medicines both Internal and External, which must never be adhibited before Mear, but always after, such are Peony roots (taken up at the New Moon,) roots of round Birthwort, Castoreum ; flowers of Stachas, Cotten-weed, Prim-rose, bark of the Line or Tile-tree, flowers and leaves of Lilly-Convally, Rosmary, Vervain, Rue, Time, Savoy, Betony, Marjoram, Black-Cherry and Treacle waters, Venice Treacle, Mithridate, Confectio Anacardina, Alkermes, Tincture of Sassafras, Guajacum, and Cinnamon. The Powers or Quintessences of Rosmary, Rue, Oranges, Limons, Carraways, Amber, Nutmegs, Cloves, &c. Balsams of Lavender, Rosmary, Amber, Rue, Cloves, Nutmegs, Angelica, &c. Thirdly, by a warming and heating Diet, wherein Suffumigations have their use and place.* § 4. *The Cure of a dry Distemper. It is done first by Internal and External moisteners, as Evulsion of the greater cold seeds, Violet flowers, &c. and Buthing the Head with Whey. Secondly, by a Diet more than ordinarily moist, as the fat of broths of young flesh, Eggs re-*

boyled, baths of sweet water, avoiding Salt altogether, or eating of it very sparingly: § 5. *The cure of a moist Distemper. It is done, first, by Alteration, with things drying, as decoction of China, Sarsa, and Guajacum, into which a little Veal Broth (to allay it) may be put : outwardly you may apply Sacculi or little bags made of Millet, Roman Nigella, called Gith or Pepper-wort, &c. Secondly, a drying Diet, such as is that which we commonly institute in the Cure of the Pox: Hetherto of the Cure of a Distemper without matter, now of a Distemper with matter. § 6. If it be by consent, or sympathy, wherein the matter is transmitted to the Head from some other place : you must begin the Cure with the part transmitting, unless there be a Crisis: Secondly, you must make Revulsion, by Cupping Glasses, Vescicatories, Cauteries, Clysters, and Frictions. Thirdly, you must use Repercussives, as Oxysrhodium &c. unless a Fever, Catarrh, or want of Sleep forbid it. Fourthly, you must use Interceptives, the kinds, qualities and way of application of which we have often taught in many other places. § 7. If it proceeds from wind or vapors, it is expelled by taking Zedoary, both inwardly and by fume, Treacle water, &c. by Errhines and Sternutatories : but this, whether it be Essential or by Consent, is chiefly cured first by Revulsion by Clysters stronger than ordinary : by Repulsion with Oxysrhodium, &c. and Internally with Electuary of Zedoary. Secondly by Evacuation*

tion with proper purgers (according to the humor abounding) corrected with Carminatives. § 8. If it proceeds from Distemper of the Blood, the Cure is immediately to be attempted, least an Inflammation should follow. If the courses or Hemorrhoids be suppressed they are to be provoked: the first with Tincture of Gum Guaiacum, the other with Leeches: and if the Distemper is violent provoke bleeding at nose with a sprig of Yarrow put up into the Nostrils, and there rubbed up and down. Make Revulsion by Cupping, Frictions and Ligature. Use *Repercussives* which are potentially cold, and in Summer time such as are actually so, unless a Catarrh forbid it. If the hinder part of the Head be afflicted, use *Discussives* with a fitting Diet: and by proper Catharticks make a gentle Evacuation. § 9. If it proceeds from Choler, it is cured first by Revulsion, a gentle Clyster being first given without ordaining any preparative. Secondly, by preparing the Body with cooling and moistning Cephalick Medicaments. Thirdly, by Purgation with Aloeticks, and other things especially appropriated to the Brain. Fourthly, by wasting the remainder or Reliques, wherein Camphir ought to be avoided. Fifthly, by digesting with digestive Medicines. Sixthly, by a proper diet wholly opposite to the Distemper. § 10. If it proceeds from Melancholy, or Atrabilis, you must first often reiterate the preparation of the Melancholy humor (that it may be made the more

fluid;) the first Vessels and passages being before hand opened by fit purging. Secondly, by a frequent and reiterated evacuation of the humor, by *Lapis Lazuli*, and other Melanagogues mixed with moisteners: as also by those things which have a peculiar property to purge the Brain: to which you may add *Erybines* and such like. Thirdly, by digestive topicks, sweet-water Baths, &c. and if the Distemper be stubborn, let the Sick drink the Infusion of such things as are Specificks against Melancholy, in Whey. Fourthly, by corroborating the Brain which *Confectio Alkermes*, both Vulgar, and of Our prescription, *Confectio Anacardium*, and other things. Fifthly, by a proper diet against Melancholy, wherein Vinegar is principally to be avoided, for that it doth ferment, and as it were leven and sower the Melancholy humor. And here, if the Terms or Hemorrhoids be obstructed, they must be provoked. § 11. If it proceeds from a serous or watery humor, you must first, Evacuate the humidity from the Brain, by proper Hydroticks as *Pilule Lunares*, without premising any preparatives whatsoever; and this is done, by purgation of the humor with such things as draw water: by provoking any accustomed evacuation suppressed: and by exhibition of Sudorificks, as *Antimonium Diaphoreticum*, *Bezoarticks*, *Liquor Vitæ*, &c. Secondly, by correcting the Distemper, for which purpose the Powder of Mans Bones is commended, drying Lotions, &c.

§ 12. Where it proceeds from a cold, moist, and stigmatick humor, The cure is performed first by Alteration, (the first Vessels and passages being before hand cleared; which you may do with Decoctum Catharticum Quercetan, or Senæ Gereonis, or Infusure of Agarick;) these Alteratives must be Cephalicks, hot and dry, among which we know few better things than Rosmary Flowers, Sage, Zedoary, and Gentian: this last (if the Sick be prevailed with) should be continually chewed in the Mouth. The Powers of Rosemary, Sage, Sassafras, Rhodium, Oranges, Limons, Citrons, Cloves, Nutmegs, and Cinnamon, any of them being taken every Morning, Noon, & Night, gut. xx. at a time in a glass of Canary, presently after eating, wonderfully strengthen and dry the Brain: but for a constant Drink, to be taken every day, I commend the diet incap. 26. sect. 18. § 16. for it opens, draws forth the humors, warms & dries, to also, the Decoct. of China, Guaiacum and Sassafras. § 13. Secondly, by general Purgation, for which purpose you may use Extractum Phlegmagogum, Tinct. Phlegmagoga Grulingij, Pilulæ cochix majores & minores, Afajereth, Aureæ, Rudij; Pills of Agarick are excellent for this purpose, so also Elect. Diacarthammum, or Diaphenicon: but above all we commend the Pilulæ Lunares, as a most admirable and absolute thing. § 14. Thirdly, by a sudorifick evacuation, which is best performed by a strong Decoction of Guaiacum, Sassafras, and Sassafras: or rather by the Decoctum Sudorificum Empirici Germani, taken as

we have in the place directed for three weeks or a month: but this always observe in the use of Sudorificks, to purge once a week, and then that day to omit the Sudorifick, giving also every third or fourth day a Clyster. § 15. Fourthly, by particular Evacuations by Errhins, Sternutatories, Gargarisms, Masticatories. An Errhine: R. juices of Marjoram, Sage, Betony, Primrose, Flower de luce roots; prest out by moistening them with white Wine, Ana. A Sternutatory: R. leaves and stalks of good Tobacco, Ana, make them into a fine powder: but the sneezing powder of black Hellebor and Sugar Candy, Ana, is commended above all: yet no ways inferior is the Pulvis Sternutatorius Deckeri. A Masticatory: R. Pyrethrum ʒij Mustard seed, flaves acre, A. ʒj. being in fine powder, make it up into little Balls with white wax. A Gargarism: R. flaves acre ʒiv. Mustard seed ʒij. Pyrethrum ʒj. boyl in water and honey to ʒij. in which mix Vinegar of Squills ʒij. The evacuation by the Pallat is safer than by the Nose, and more natural; nor is the Brain so much shaken by it as by Sneezing; but Errhines draw more violently, and are dangerous, if there is any Disease of the Eyes, Or the Nostrils be ulcerated, Or the Sick is inclinable to bleeding at Nose. In using liquid Errhins, you must first fill the Mouth with Water or Wine, lest the Errhine should get into the Mouth: yet those that so pass through bring the humors the more forcibly out at the Mouth. A Vesicatory to the Nape of the Neck is very good.

§ 16. Fifthly, by the use of *Toppicks*. Some apply these *Sacculi*.
 R *Aniseed*, *Fennel seeds*, *Bay-berries* all in powder, *Ana*. Or this.
 R *Coriander seed*, *Bay-berries*, *Cinnamon*, *yellow Sanders*, *Cloves*, *Mace*, *Nutmegs*, *Ana*. make all into a fine Powder. Others use
Emplastrum Cephalicum: Or *Oxyroceum*: Or *Scitacum Paracelsi*: Or *Cephalicum Schroderi*: Or *Stomachicum Monardi*: Or *Dia-phœnicum Calidum*: Or *Nervinum*. the Head being first shaved and well anointed with the *Balsamum Nervinum Schroderi*, or else with *Oyl of Amber*. § 17.
 Sixthly, by application of a *Cau-ry* to the *Coronal Suture*: Or else by making an *Issue* in the Neck, if the Distemper be yet refractory, or will not give place or yield to the aforesaid Remedies. § 18.
 Seventhly, by corroborating the Brain with proper *Cephalicks*. This is done by many of the things at § 12 and 16 and in especial by the *Decoctum Sudorificum Empirici Germani*: The fume of the *Trechisci pro fumo*, with and without Musk, are here very good: so also the *Balsamum Apoplecti-cum Myrsichri* to smell to, and to anoint the Nose and Sutures of the Head withal, and also to take inwardly every morning and night à gr. iij. ad vj. but if it be mixt with *Oleum Cranij humani*, it will be still more powerful. We here commend also the *Poulters* or *Quintessences* of *Car-ways*, *Juniper-berries*, *Myrrh*, *Bawm* and *Mint*: *Elixir propri-etatis Paracelsi*, *Elixir Ciri*, & *Antepilepticum Croliij*: But *Tin-ctura Antimonij* (see it in Our

Pharm. lib. 3. cap 8. sect. 9.) is inferior to no other thing. Once a week take the *Tinctura Poleg-magoga* or *Hydragoga Grulingij*: and every morning fasting for two or three months together take ʒss of *Venice Treacle*, or ʒj of the *Pestilential Extract* of *Schroder*, drinking after it a small glass of *Hippocras*: Baths of *Brimstone* and *Niter* to fall down upon the Head warm (as we have formerly taught) for several days, warm, dry and strengthen the Brain much, and experience confirms it to us, that the most grievous Diseases of the Head coming of cold Distem-pers, are by them cured. § 19.
 Eighthly, by a proper Diet, contrary and opposite to the Cause and the Distemper. Let the Air, Food, Drink, be hot, dry and pure: his chamber fum'd with proper suffu-migations; and let him forbear all gross, cold and moist things: *Car-rots*, *Parsnips*, *Parsly*, *Mint*, *Hypo-p*, *Time*, *Marjoram*, *Pepper*, *Ginger*, *Cloves*, *Mace*, *Nut-megs*, *Cinnamon* are good: but *Milk*, and all milk meats, *Oni-ions*, *Garlick*, *Mustard*, *Rocher*, *Radishes*, *Beans*, *Pease*, and green raw Fruit; and all gross Food, as *Pork*, *Bacon*, *Venison*, *Hares*, *Goose*, and *Sea Fowl*, are naught, and specially to be avoided.

XXVII. Commotion of the Brain.

§ 1. The cure is accomplished First, by *Revulsion*, by frictions, strong Iguice in the extrem parts, cupping, &c. § 2 Second-ly, by evacuation of the Blood (if any of it be shed forth, by opening a Vein, as well that called *Puppi* that is above the *Lambdoid* Su-

Sature, as that which is under the Tongue ; or by putting a sprig of Yarrow up the Nostrils, to provoke bleeding by the Nose. § 3. Thirdly, by *Repulsion* or driving back, yet always avoiding such things as are dry and astringent, lest the Pores should be closed, and the Breathing intercepted. § 4. Fourthly, by Discussion; wherein first you ought to mix Discussives with Repercussives : afterwards to use Discussives alone. § 5. But if by reason of the violence of the Disease, there is a *Sphacelus* or Mortification, it is very dangerous, and for the most part Mortal, even in three days time, as Hippocrates sheweth Sect. 7. Aph. 51. *they who have a putrefied Brain dye in three days : if they live longer they recover : but if it be a Sphacelus or compleat Mortification it is incurable.* If they recover, the Sick remembers nothing past either of the Disease or pain, or any thing concerning it. § 6. *It is caused from a preceeding Inflammation; and is always accompanied with a most sharp and strong Fever, great Head-ach, which is communicated to the Neck, and all the Back, after which comes a decay of all the Senses both Internal and External, as in an Apoplexy: the Sick is tossed too and fro, and cannot remain in the same place: he lays hold with his hands upon his Head, plucking his Hair, and desires to tear and scratch his Face: he refuses all Meat and Drink, and rising from Sleep, sometimes suddenly roars out, and presently lyes down again: and many*

before they dye, send forth a filthy green matter at their Mouth and Nose. § 7. *The Cure must be immediately attempted: you must let Blood often and much three or four times a day, as strength will permit: for as a great quantity of Blood possesses the substance of the Brain, which is soft, large and moist, so in Blood-letting lyes the chief Remedy; nor can a Revulsion great enough be made except you draw out almost all the Blood in the Veins: and here Celsus his opinion takes place, that a dangerous or desperate remedy ought to be used, rather than the Patient should absolutely perish by a desperate Disease.* § 8. Secondly, Give sharp Clysters every day, to bring the humors downwards: apply cups to the Back and Shoulders with deep Scarification: use Frictions and Ligatures to the extreame parts: open an Artery in the Forehead: and set Horfleeches behind the Ears: provoke the Hemorrhoides, and blister the Arms and nape of the Neck: Inwardly give Spirit of Sal Armoniack, in a proper Vehicle, letting the Sick smell now and then a little to it.

XXVIII. Inflammation of the Brain.

§ 1. *Because of the great quantity of Blood which possesses the substance of the Brain, there is a necessity of Blood-letting as in the former Section, by opening the Cephalick or Median Vein; but take not away Blood to fainting or swooning away.* § 2. *Apply Cups with deep scarification in parts both above and beneath, with*

other

other kinds of Revulsions. § 3. By Repulsiues drive back the matter; Or else apply to the head (being loose shaven) Medicines a little warm, and mixed with Vinegar, if there be no apparent heat; but if there is any heat or inflammation, then let them be cold. § 4. Make Interception, by binding or rowling the neck with swath bands.

§ 5. Carry the humor downwards by gentle purgation, with such things as agree with the humor abounding. § 9. Evacuate the humor or blood already flowed in by opening the Veins of the head, those under the Tongue, and those in the Nostrills by a sprig of Yarrow: also apply Vesicatories and Cups to the forehead of the head: and resolve the matter as much as may be with Discussives, for which purpose, the Alabastrin Unguent is commended. § 7. Lastly Order a good Diet, proper to the Constitution, but make the sick avoid Emptiness and over-long fasting, for that is extreame pernicious.

XXIX. Confusion or bruising of the head.

§ 1. The afflux of the matter or humors to the place is to be hindered by Revulsion, as also by applying to repellers and astringents; which are often to be removed and changed, least that they become over-hot: let the hair be shaved off, and the place anointed with Oyl of Roses. § 2. Let the blood be evacuated which is poured forth under the skin by insensible Transpiration, by applying Empl. de Betonica, de Ranis cum §. de minio, de Gratia Dei: de Galbano Crocatum Mynsichti, &c. § 3.

If it cannot be discussed, but must come to suppuration, let it be helped on with Triapharmacon mixt with wheaten Meal and the yolk of an Egg; or with some other suppurative. § 4. The matter being converted into Pus, let Section be made in a sloping or impending part, that so it may be drawn forth, then heal it as an Apocrite. See Cap. 24. Sect. 30. Cap. 25. Sect. 47. Cap. 27. Sect. 11.

§ 6. 7. 8. 9.

XXX. Hydrocephalus, A Dropsey or watery swelling of the Head.

§ 1. In the Cure of this Disease a Seton or Issue is made with great success in the nape of the Neck; because the cavities of the Dura mater, are thereabouts joyned to the Jugular Veines; especially in Children, in whom very often the Sutures do too much gape. Blisters and Cauteries are here also very profitable. § 2. Foment the Head with Spunges dipt in Aqua calcis vivæ; and then bind them well on: Or the Patient may sit under the falling of Sulphurous and Nitrous waters,

as we have formerly directed; and if all things fail, let Actual Cauteries be applyed to several parts of the head at several times, there where the Serum makes it appear most sitting.

§ 3. If the Water be under the Skull, make Incision near the sagittal suture, and discharge the water, but not too much at once, especially in Children; but remove it by degrees, and with both Internal and External Discussives: this may be done with a Paracentesis. § 4. Draw forth the

Water

Water with Hydraguges; as also by sweat and Urine; by diyers and insensible discussives. § 3. Reduce and strengthen the Brain by hot Cephalicks: anoint it with Oyl or the Powers of Amber, Rosemary, or Sage; and apply over it, Empl. de Galbano Crocatum Mynsichti.

XXXI. Unnatural Watchings.

§ 1. The Cure consists first in removing the Causes which occasion and produce these preternatural Watchings. § 2. In procuring sleep by applying outwardly cooling Cephalicks or Narcotics, such are the fat of the Fish Lucius (or of the Pike) anointed on the Temples Vinegar of Roses mixt with Oyl of Roses to foment withal: A Cataplasim of Poppy seeds with Oyl of Henbane and Breast-milk to apply to the Pulsles; juyce of Houssleek and Nightshade to bath the feet withal: Ung. Populeon to anoint the back, Temples and Forehead with, &c. § 3. Give Inwardly the Hypnotick Wine of Mynsicht, Liquor vitæ Anodynus; Opium corrected with Saffron. Confectio Anodyna, syrup of Poppies mixt with Syrup of Lettice and Poppy water; Magistery of Corals, Oyl of Sulphur and Vitriol, &c. for these last give rest by cooling the whole Mass of Blood. § 4. If it proceeds from the objects of the external senses, let the Sick eat Lettice, or give him to take Syrup of Lettice, and anoint his Temples and Nostrils with Oyl of Nenuphar, or of the Water Lilly.

XXXII. Cataphora, The sleep-

ing Coma, called also Subeth.

§ 1. If it proceeds from the humidity or frigidty of the Brain, the matter in the head ought to be discussd and evacuated: if from the first cause by irrigation or often washing of the head with the sharpest Vinegar of Roses: if from the latter cause, by anointing the head with Oyl of Dill warmed: but in both cases you must use frequently Apophlegmatisms, Errhines and Sternutatories. § 2. If it proceeds from Narcotick vapors occasioned by much Drink, you must exhibit an Emetick, as Oxymel Scylliticum, Vinum Benedictum, Sal Vitrioli, &c. § 3. If from Narcotick vapors joyned with a Feaver, then you must first use Revulsion by Clysters, Vescatories, Cupping glasses, Frictions: Secondly, repel with Oxyrrhodinum actually hot, applied to the Coronal sutures; Or, discuss with Vinegar of Rue, Castoreum, &c. which is better; but you must take heed that what you give to expel sleep do not increase the Feaver. § 4. Inwardly give Essences of Rosemary, Sage, Rue, Castor, Oranges, Limons, &c. in Generous Wine; as also Spirit of Sal Armoniack, to which last also, let him often smell. § 5. If these things do not, you must follow the method of the Cure of a Lethargy, which see Sect. VII. foregoing: Purge with Phlegmagogues.

XXXIII. Oblivio, forgetfulness or hurt of Memory.

§ 1. The Cure of this has respect to its several causes, and may be understood by what we have already said concerning them in their

pective places. § 2. Those things which resist a cold and moist temper of the Brain are here particularly good; among which are *Aqua Magnanimitatis*; whose Author was *Cunradus* (see it in *Our Pharm. lib. 4. cap. 1. sect. 49.*) *Lilly-Convally*, *Bawm*, *Frankincense* taken in weight Oils with *Wine* and *Nutmegs*, &c. § 3. Among *Specificks*, the powder of *Tritheimius* is commended: as also *Confectio Anacardina*, *Tinctura Antimonij*; But the *Aqua & Balsamum Maemonicum Sennerti*, *Pilule Lunares*, & *Tinctura Lunæ* taken in water of *Lilly-Convally* are superiour to all other things.

XXXIV. Delirium or Dotage.

§ 1. If it be a primary Dotage, it must be cured altogether in the same manner as *Melancholy*, at *sect. XVI. foregoing.* § 2. If it be that which is called *Temulentia* or *Drunkennes*; it is cured by Vomiting well, and then giving after it things acid and sharp, for which purpose we commend the *Pulp* or *Broth of Tamarinds*. § 3. If it be Sympathetical with a Fever, it is cured first by *Revulsion*: Secondly, by allaying the great heat of the Blood in the head by *Topical Medicaments*: Thirdly, by the application of *Hypnoticks* or things causing sleep: Fourthly, by evacuation of the matter already in the head; and likewise by *Discussi*on of the same by applying to the head *Pigeons* cut in the midst alive; Or, which is better, the hot Lungs of a Sheep newly killed.

XXXV. Rabies, Hydropho-

bia, Raging Madneß by biting of a Mad Dog.

§ 1. We shall consider this Disease first in respect of Preservation: Secondly, in respect of Cure. § 2. In respect of Preservation, that the Poyson may not penetrate into the body, and seize the *Vital* and *Animal Spirits*: first make a *Ligature* upon the part afflicted; if it cannot well endure it, or be inconvenient, lay upon it such things as have an *Interceprive* and *astringent* property. § 3. Secondly, apply *Cupping-glasses* with *Scarification* and a good store of flame, if the Wound be little; but without *Scarification*, if the wound be large, suffering it to bleed long and much. § 4. Thirdly, Enlarge and widen the Wound if it be over narrow, that so the Poyson may the better flow from the part afflicted. § 5. Fourthly, apply vehemently attractive Medicines, or else an *Actual Cautey*; and be sure that you heal nor close up the Wound under 40 days at least. *Actius* affirms, That *Sorrel* beaten and applied to the Wound; and its Juyce or Decoction taken inwardly is very effectual in this case. A *Lotion* and *Friction* of *Mustard* dissolved in *Urine* or *Vinegar* is excellent: so also *Rocket* boyled and beaten with *Butter* and *Salt*: Or *Orob*us meal mixed with *Honey*, *Salt* and *Vinegar*: Or, a *Cataplasm* of *Horse-dung* boyled in *Vinegar*: Or, *Black Pitch* mixt with *Salt* and a little *Euphorbium*; Or a *Fomentation* of *Decoction* of *Hops*, the Herb being afterwards applied as a *Cataplasm*: Or a *Cataplasm* of *Betony* and *Nettle*

Nettle Leaves with Salt : Or, Onions beaten with the leaves of Rue and Salt : Or a Fomentation of S.V. in which Venice Treacle or Mithridate is dissolved, rubbed so hard on that the Blood may follow : Or, a Cataplasm of the last things mixt with a little S.V. Or a Cataplasm of Garlick and Onions beaten with Salt and Turpentine, which is admirable, and has cured many. § 6. Fifthly, Inwardly give Garlick to eat with Bread, drinking after it a Glass of good Wine, for this defends the Noble parts from Poyson : But some advise to give the powder of the Liver of a Mad Dog to ʒj. or ʒjss. two or three times, affirming that there is no better remedy. Others eat the said Liver roasted : Or the seeds of Agnus Castus ʒj. to be drunk in Wine : Or the Ashes of River Crabs so drunk ; Or the Pulvis Antilissus to ʒij. in Decoction of River Crabs. § 7. In respect of the Cure properly so called, first Purgation must be used, which must be chiefly by Hellebor in Tincture, Decoction or Extract ; Or some good preparation of Antimony, as Vinum Benedictum, Aqua Benedicta Rulandi, and such like. § 8. Secondly, Sweat with strong Sudorificks which retund the Venom, as Treacle potions, Treacle water, Our new London Treacle, Tincture of Antimony, Liquor vitæ Anodynus, Spiritus ex tribus, or Mixture simplex, Elixir proprietatis, and many other things of like nature. § 9. Use hot baths which may disperse and draw forth the Poyson by sweating ; and apply also the strongest kinds

of Veficatories to the part, or the places neer adjacent. § 10. The Diet be such as is commonly prescribed to Melancholy people ; they may eat Garlick, Onion, Leeks, all spiced meats and drink strong Wine : Let the Sick avoid Bleeding and Hunger, and things extreamly prejudicial to his Cure, as also sleeping ; for by sleeping the humours flow back into the Bowels. § 11. Lastly, exhibit Antidotes in double Dose, as roots of Angelica, Gentian, Tormentil, Burnet, Vervain, Carduus, Borage, Contra yerva, &c.

XXXVI. Coma Vigil, The Waking Coma.

§ 1. The Cure is the same with a Phrensy or Lethargy, having all those Indications of Cure : if it inclines most to a Phrensie, then the remedies proper to that are most used : but if it inclines most to a Lethargy, then the Medicines for a Lethargy are to be adhibited. § 2. If it comes by Sympathy, it is cured by curing the Malignant Feaver of which it comes. Yet those special Remedies ought to be used, which draw and keep the humors from the Brain, as Cupping Glasses to the Shoulders, Back, Hips and Thighs : applying Leeches to the Temples and behind the ears : Clysters to draw the humors downwards ; and Discutients to the head to dissolve and dissipate the matter, for which purpose the hot Lungs of a Sheep new killed ; or the Crumbs of a Loaf hot out of the Oven are excellent. Vinegar of Roses applied to the forehead does also repulse the humor. § 3. Make

Evac.

Evacuation of the matter by Er-
rhines and Apophlegmatisms: and
urge the Sick well with Phlegma-
gogues mixt with Cholagogues, be-
cause the Disease seems to arise
from a complex cause: R. Tin-
tura Phlegmagoga & Cholagoga
Grulingij, A. ʒj. mix for one Dose.
§ 4. As a Specifick give often Spi-
rit of Sal Armoniack, and the Vola-
tile Salt thereof in Canary: and
let the Sick also much smell to
the same.

XXXVII. Rigor, an extream
coldness and stiffness.

§ 1. The cure is to be accompli-
shed by taking away the cause; the
cold viscus humors are to be eua-
cuated by purgers or vomitories: the
coldness is to be removed by
things heating: and the stiffness
is to be taken away by things
Emollient and Discussive. § 2. Let
Purgation be made with Tincture
or Infusion of Sena, or Tinctura
Catholica Grulingij, or with our
Elixir vitæ: where, if the Bo-
dy is bound, you will do well to
give a Clyster before hand.
§ 3. The coldness you may remove
by anointing with Oyls or Balsams
of Amber, Juniper berries or Bay-
berries; the parts being first fo-
mented with warm water; or
with Water and Wine; after-
wards apply a drawing and at-
tractive Emplaster, that the Na-
tive heat and spirits may be
brought into the parts. § 4. The
stiffness will be taken away by
Ung. de Althæa, Hens, Ducks,
Goose, or Bears Grease, but
chiefly by the anointing with
Mans Grease: then apply an
Emollient Cataplasim: then mix
emollients with discussives;
after use Discussives alone, as

Empl. de Galbano crocatum
Mynsichti, or the Ceratum de
Ammoniaco Forresti. § 5. Lastly,
strengthen the parts by giving in-
wardly Antidotes, such as are gi-
ven in malign Feavers and against
the Plague; for as much as many
times this Disease proceeds from
a malign Cause; and outwardly
over all apply Emplastrum de
Minio, which confirms and
strengthens wonderfully.

XXXVIII. Glaucoma, The
Pin and Web in the eye.

§ 1. The Cure is performed by
Universals or general remedies
first adhibited. § 2. By applica-
tion of abstersives, among which
the Gall of a Pike mixed with Su-
gar has the prebeminence, and is
indeed a most admirable thing,
the whole body being before
hand purged, and a Vescatory
laid behind the ears. Spigelius
commends the Oyl of the Liver
of a River Weasel in a suffusion,
which is yet more powerful in
this, to which add the eye water
of Martin Rulandus. § 3. By Chy-
rurgery, as we have taught in the
couching of a Suffusion or Cataract.
See the cure of Albugo or the
Pearl at sect. XIX.

XXIX. Hypophagma, Sugilla-
tion, A redish or black and blew
spot called by some Blood-shot.

§ 1. In the Cure of this Disease,
first prescribe universals, or general
remedies, if the afflux be greater
than is usual. § 2. Secondly, ap-
ply Discussives, first, such as are
more gentle, mixed with Astrin-
gents: afterwards those that are
more strong and forcible, yet void
of acrimony and sharpness, least
more of the Blood should be
drawn to the part affected. § 3.

If it comes from an External cause, as a blow, noise, sounding of Trumpets, you must use Topicks, as a decoction made of Melilot, Roses, and Fænugreek-seed; Or this Collyrium, ℞ Pigeons Blood, taken out of the Wings ℥ij. Breast-milk ℥iv. Frankincense ℥j. mix them. § 4. If from an Internal cause, you must withstand the Inflammation, by the white of an Egg well beaten together: if there be present any Pus or purulent matter, wash the Eye with this Collyrium. ℞ Mucilage of Fænugreek seed in Fennel water ℥ij. Honey of Roses ℥ss. mix them. § 5. If it be Recent, you may use the former things to which may be added the Tops of Hyssop, boiled in water to a Cataplasim, which may be tyed up in a little bag, and so applyed. § 6. If it be inveterate and of long standing, wash the Eyes with this Collyrium. ℞ Juycs of Celandine and Carduus, A. ℥iv. Fat of the bird Quæstula melted ℥ij. Myrrh ℥ss. roots of Solomons Seal ℥j. mix, and shake all well.

An Appendix concerning Pterygium, or Haw in the Eye, called Unguis or the Nail.

§ 7. It is a little membrane, nervous, fibrous, and somewhat white, proceeding from the corners of the Eyes, especially the greater; and cleaveth fast to the Adnata Tunicle: it is sometimes drawn out in length even to the Cornea: and sometimes it covereth the Pupilla or Ball of the Eye. § 8. It is sometimes thin and white, sometimes fleshy, with many red Veins, which if it covers the whole Eye, and is very red and full of Veins is called

but by the Latins, Pannicle. § 9. It is caused of Blood mixt with thick and viscus humors or excrements, flowing down to the Eye from these parts between the skull and the skin: Or from an Exulceration of the flesh, in the corner of the Eye, or of the Adnata, whence comes a roughness or inequality in the part, which being filled with Blood, begets a preternatural encrease of the Membrane, whereby it is covered with a skin. § 10. The Prognosticks. It is hard to be cured, and that in a long time; because sharp Medicines, to eat it away, cannot be applyed but by degrees: if the Eye grows smaller it is an evil sign, shewing the debility of the part: if the Haw be recent and small, it may be cured by Medicines: but if it be old, overgrown, and covering the Pupilla, it cannot be cured but by Chyrurgery: if it be thick, turned out, stretched forth, hard, and black, it is Cancerous, and incurable. § 11. The Differences: Some are Red, coming of pure Blood: some yellow, from choller: some white, from Flegm: some dark, brown or black, from Melancholy: Some are hard, others are soft: some are easily separated from the Adnata, and Cornea; others stick fast: some are without malignity and simple: others are malign and cancerous. § 12. The Cure is to be directed to the Antecedent and conjunct causes. In respect of the Antecedent: let a good Diet be ordered as in amaurosis, or Cataract; then Evacuations and Revulsions as Purgations, Cuppings, Vesication

ries, Issues, Seton, &c. § 13. In respect of the conjunct causes, you must use Topicks which may consume the Haw, beginning first with mild things, such as we ordered in Phlyctenæ oculorum; which not prevailing, you must use stronger. There is commended the Powder prepared of Eggshells, to be cast upon the Eye: the Medicinal stone of Crolius dissolved in Rose and Eye-bright water: The Gall of a Pike, which is accounted a specifick: Hartmans water of the whites of Eggs: which things if they should be too sharp must be qualified with Gum Tragacanth. This following is a good one and mild. R of sugar candy ʒj. prepared Tutty ʒss. Cuttle bone ʒj. Vitriol ʒss. mix and make a fine Powder to lay upon the Eye. Or this Collyrium of Forrestus: R Juices of Fennel ʒiv. of Celandine ʒiiij. of Rue ʒij. of Althea and Mallows, A. ʒj. Gall of an Eel ʒss. Gall of an Ox or Hog ʒij. Aloes ʒj. Vitriol, sugar candy, A. ʒij. Verdigrise ʒj. Ginger, Cinnamon, A. ʒss. boyl all together, clarify, and make a Collyrium. Or this Powder of the same Forrestus: R lapid Hematitidis ʒij. white Vitriol and Verdigrise, calcined, A. ʒiiij. sugar candy ʒiv. Myrrh, Saffron, A. ʒj. long Pepper ʒss. powder all very fine, to which put double its weight of Radish water, and apply it to the Eyes twice or thrice a day, as the Sick can endure it: but before you use these remedies, foment the part with an emollient Decoction, which do also afterwards to assuage pain, § 14. If all things will do nothing, you must

come to Chyrurgery, taking up the Ungula with a Hook as the bottom or root; drawing a double Thread through it with a Needle; then laying it down on both sides beneath, cut it off with Scissers, as Celsus, Paulus, Aetius, and Aquapendens have taught: after Incision, lay on lint, drpt in Rose-water and the White of an Egg, to hinder Inflammation and assuage the pain: lastly heal it up with drying Medicines, as the white Troches of Rhasis, Sief de Plumbo, sief de Thure, and such like.

XL. Mydriasis, Platocoria, Dilatation of the Pupilla.

§ 1. If it comes from Dryness, you must refresh the whole Body with moist remedies and a humid Nourishment, such as is used in Heftick Feavers: the Body is to be moistned with a bath of warm water. The best remedy in this case is Goats Milk, if the Eye be well washed therewith, and as it were drenched therein. § 2. If it comes from humidity it is performed by universal remedies first premised: by applying Cupping-Glasses to the hinder parts of the Head, and Leeches behind the Ears: by the use of Dissussive Medicines, among which salted water is much commended: and those other things proposed in the Cure of a Cataract, afterwards you may use Astringents, as sief de Plumbo or de Thure. § 3. If it come from a Stroke or blow: if there is an Inflammation, you must cure it as an Ophthalmia: if no Inflammation apply a Cataplasma made of Bean flower, Plantane leaves and red Roses made up

with Rose-water : after which often drop into the Eye the Blood of a Pigeon, which is an admirable remedy in all Wounds and Contusions of the Eyes.

An Appendix concerning Myofis, The Contraction or narrowness of the Pupilla.

§ 4. It is known by this, that all objects which the Sick looks upon seems bigger than they are indeed.

§ 5. It is caused from the contraction of the Uvea, through over much moisture or dryness, or defect of the watery humor, and want of Spirits, by reason of the Obstruction of the Optick Nerve, or some other cause, which hinders the visive Spirits coming into the Eye, which fill and extend its Tunicles. § 6. If it comes from the loss of the Watery humor in the Eye, it is incurable especially in old people : in young people where it has been let out by a Wound, it has sometimes (though seldom) been repaired again. If it comes from dryness, or is very old, it is very hardly cured : but if from moisture, being recent, and in one that is young, it is not difficult.

§ 7. The Cure. If it be from a defect of the watery humor, nourish the Head with sweet water and milk. If from humidity, you must use things drying, such are Rew and Celandine. If from a want of Spirits (which most commonly happens to Aged people) as the Cure is very dubious, so if any be attempted, you must perform it as in an Amaurosis, and with the same things.

XLI. An Aposteme of the Ears.

§ 1. It is cured as other Inflammations and Apostems : but the things are particularly to be observed : First, that convenient resolution be made according to the nature of the part. § 2. That Rpercussives be seldom made use of : where, if at any time we are necessitated thereto, we mix them with things which assuage pain, as Breast Milk, and other like matters. § 3. That in promoting the Suppuration, you apply a Cataplasim made of Figgs boyled in Milk, and beaten up with Hogs-grease : a Cataplasim also of roasted Onions is admirable. § 4. That for the breaking thereof, the juyce of a small Frog, mixt with a quarter part of Breast Milk, has been found an approved remedy : Some also say, That Leeches are successfully applyed behind the Ears : but rather after the breaking than before.

XLII. Ulcers of the Ears.

§ 1. The humors abounding are to be purged out with gentle Medicines often repeated, and to be derived by Vescatories to the Neck, and by a Caustick. § 2. You must consume the superfluous humidity with a sudorifick Diet, and other things ordered in the cure of a cold distemper of the Brain. § 3. Then the Ear is to be cleansed and dried with this Medicine. R Juyces of Agrimony and Wormwood, A. ʒiv. white Wine, Honey of Roses, A. ʒj. boyl a little, and drop of it into the ear after it is wiped, then stop it with Cotton dipt in the same : if you add to it the juyce of Gentaurry the less, it will be yet the better. Or you may wash it with warm Wine in which Role and Ivy

Ivy-leaves have been boyled ; Or with honyed water in which white Hellebor-root has been boyled or infused seething hot : and this is of admirable ule if the Ulcer is Fistulous. The Urine of an Ass, or of a young Child is approved, especially if rasplings of Guajacum have been long infused therein : So also honeyed water mixed with the Gall of a Bull ; Or Oxymel, which is especially good if there be clods of Blood : Or Oyl of bitter Almonds which may be injected with an ear Syringe : Or this ; *Rx* Juyc of Saw-bread ℥j. Old Wine ʒj ss. Myrrh ʒj. Frankincense ʒj. Saffron, Verdigrise, A. ʒss. boyl a little, and drop of it twice or thrice a day into the Ear, after it has been first washt with Hydromel and wiped with Lint upon a Probe. § 4. If the Ulcer is very foul, you must use *Ægyptiacum* dissolved in juyc of Centory. § 5. If the Ulcer comes from sharp Medicines, drop in Oyl of bitter Almonds mixt with Myrrh, Aloes and Saffron. § 6. When the Ulcer is sufficiently cleansed you must come to cicatrising with dryers ; for this purpose we commend *Aqua Ophthalmica nostra* as an absolute thing : Or, burnt Alum mixt with White Wine which has a very great drying quality. Or this of *Valesius* : *Rx* Honey ʒx. Vinegar ʒviij. boyl and scum, then add Verdigrise ʒj. mix them, and drop of it morning and evening into the ear. being first washed with this : *Rx* Juyces of Agrimony and Centory, Tanisie and white Wine, A. ʒiij. clarify ; then add red Wine ʒvj. Oxymel simple ʒiij.

Alum poudred ʒiij. See more hereof in cap. 26. sect. 26. § 2. 3. 4. 5.

XLIII. Pain of the Ears or Inflammation.

§ 1. If it come from a cold distemper, hot Medicines applyed are sufficient, as the juyc of Onions mixed with Canary: if from a hot distemper, cold remedies, as the white of an Egg beaten with Breast milk. § 2. If from a cold distemper with matter, see the things prescribed for Deafness ; purge the whole body, correct the distemper of the Brain, and apply to the Ear, warm Topicks discutivive. § 3. If from a hot distemper with Choller: first revel the humor which flows to the part ; then purge with Specifick or proper Catharticks : after amend the hot distemper of the Liver with Juleps or cooling Broths, Whey of Goats milk, Oyls of Salt, Sulphur and Vitriol : apply cooling Topicks and Anodyns which ease pain. § 4. If the pain is vehement and intollerable, you must use Narcoticks : among these are the green leaves of Tobacco moistned with Rue-water, and applyed together with gr. iij. of Laudanum Paracelsi. Cupping behind the Ears with Scarrification is an admirable remedy when all other things fail, as *Zacutus* saith, *Prax lib. i. Obs. 64.* The same *Zacutus* commends four Horse Leeches applyed to the same place: Others commend the opening of the Arteries in the Temples: Sows boyled or infused in Oyls of water-Lillies and of Roses, and strained are the best of Anodynes, for they have a Specifick

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force to ease pain; so also Oyl of Scorpions, Juyce of Plantane alone is said to be a famed Specifick; or the root thereof tyed to a Thread and put into the Ear: Or this, *R* Oyl of Poppy seeds \mathfrak{z} j ss. Camphir, Opium, A. gr. iij. mix and drop into the ear. § 5. The extreame pain being abated, you may mix Discussives with Anodynes, as *R* Oyls of Camomil, Almonds and Roses, A. \mathfrak{z} j. Oyl of Lillies \mathfrak{z} ss. mix them. you may also make fomentations and fumigations with *Epithem Cardiacum* or *Hepaticum*. § 6. If the Inflammation will not dissolve, but come to an Apostemation, which you may perceive by the increase of the pain and Fever, you must cure it by Sect. 41. foregoing. In this case, to promote the Suppurati-on, apply this Cataplasim, *R* de-cipitated Salt in fine powder, \mathfrak{z} ij. Castle Soap sliced, \mathfrak{z} iiij. Oyl of Lil-lies enough to make it soft, Figs, Mithridate, A. \mathfrak{z} ij. beat altogether and apply it: Or, this, Take Mithridate, Ducks and Hens Grease, Marrow of Veal, Mucilage of Fenugreek seed, A. \mathfrak{z} j. Oyls of Camomil and Roses; roasted Onions A \mathfrak{z} vj. Saffron \mathfrak{z} ss. mix and beat them together. A Cataplasim of Crumbs of Bread and Breast milk is here commended. Or this, *R* Crums of white bread \mathfrak{lb} j. boyl in Goats or other Milk to a Pulvis; then add Yolks of Eggs N^o. ij. Oyl of Ros \mathfrak{z} ij. Saffron \mathfrak{z} j. make a Cataplasim. *Victorius Faventinus* approves this: *R* one large Onion: fresse Butter \mathfrak{z} ij. Oyls of Camomil and Roses, A. \mathfrak{z} j. Saffron \mathfrak{z} ss. mix and apply it warm. § 7. The Suppuration being made,

and the Apostem being broken, you must cure the Ulcer by Sect. XII. § 8. If pain comes from any thing fallen into the Ear; you must first try with an Ear-picker, but carefully, lest the Instrument put it farther in; if the thing fills the Ear forbear the use of the Ear picker, and put hot Oyl continually into the ear to relax the part, and make the thing and passage slippery; then cause the Sick to sneeze, the mouth and nostrils being shut, for so sometimes the matter is forced out, this you must continue till the Sick is freed. *Rhasis* affirms by his own experience the head of a Lizard applyed to the ears will draw forth any thing: Tie (saith he) a live Lizard, or one lately dead with his head to the Ear for three hours, and when you take it away you shall find the thing sticking to the head of the Lizard; and this (saith he) will draw forth any thing wheresoever it be fastned: if all this does nothing it must be drawn forth by the help of Chyrurgick Instruments.

XLIV. Tinnitus, Noise or ringing of the ears.

§ 1. If it be from an internal cause, as hot Vapours, &c. you must use things which cool and moisten: Opium may also be given, but with very great caution: Decoctions and juyces of Violets, Lettice, Water-Lillies, Purslane are here good, mixt with Bawm and Camomil to make it pierce: if these prevail not, you may use juyces of Henbane and Nightshade. § 2. If it comes from an humor flegmatick, cold and moist, it must be cured as is thickness of

hearing : after general remedies, you must use things which Attenuate and disperse (morning and evening) as the vapours of Vinegar with an Ox-gall : Oyl of Hog-llice; Oyls of Rue and of Costus; Gall of a Pike and fumes of Tobacco, and of the herb Mercury. § 3. If from filth and impurities, you must wash with the distilled Urine of an Infant or of a Child, in which rasped Guaiacum, Castor, and wild Mint have been infused. § 4. If it comes from weakness, as in those who are lately recovered from some great Disease, it will vanish of its own accord, as the body gathereth strength, yet you may drop into the ear Oyls of Camomill, Dill, Almonds, Scorpions and such like. § 5. If it comes from an Ulcer of the Ear, or from consent of other parts, it must be cured by curing the Disease from whence it comes.

XLV. Ozœna, An Ulcer of the Nostrils.

§ 1. The Cure of this Disease we have shewed in cap. 26. sect. 24. § 4, 5, & 6. but besides what is there written, these following things may be observed. First in cleansing of the Ulcer it may be done with juices of Yarrow, Horehound, Betony, Agrimony, Plantane, Wormwood, Centory the less, mixed with Honey of Roses : Or with the green water : Or with *Azypriacum* dissolved in Barly water. § 2. Secondly, Exsiccate and dry with this. R. Pomegranate rinds and flowers, A. ʒij. Plantane, Horse tail, Eleabane, Rupture wort. A. M. j. Stake dried roots ʒj. Alum ʒj ss. make a Decoction to wash or Syringe with. Or make a Lotion of Alum water; Or dry with Ung. de Plum-

bo, or *Diapompholigos* : if these things prevail not, wash three or four times a day with this. Take Plantane water ʒiv. Corrosive sublimate in fine powder gr. xij. boyl in a glass till it is dissolved: you may increate or diminish the sublimate as you would have it stronger or weaker: it cleanses and dries without any pain or biting. § 3. Authors order a fumigation from red Wine sprinkled upon red hot Iron : Or a suffumigation of Orpiment or Auripigment and Cinnabar mixed with sweet Gums, such as this : Take Labdanum, Hypocistis, Mastich, Myrrh, Benjamin, A. ʒij. Red Syrax, Syrax calamita, Frankincense bark, Juniper Gum, Cloves, Orpiment, (or instead thereof Cinnabar, A. ʒij. with Turpentine q.s. make them up into Troches, with which let the Sick be fumed morning and evening in his Chamber : but let the Nostrils be first stopt at their roots, lest the brain should chance to be smitten and hurt. *Rondeletius* saith nothing is more powerful than a fumigation.

XLVI. Ptyalism, or unnatural spitting Symptomatical.

§ 1. The Cure in general respects the Corroboration of the Tonsills or assistant Glandules on both sides of the Tongue, in regard that the Spittle is there bred or stored up; and this is done with Decoction of Balsastians, Myrrle leaves, Plantane, Alum, Pomgranate-rinds, Galls, &c. which are only to be kept and contained in the mouth, and not gargarised, lest more Spittle be attracted. § 2. If it be from an Internal cause, as *Flegmatick* humors falling from the

Brasn, it must be cured altogether as a Catarrh. § 3. If from an overmoist Stomach, especially after Chronick Diseases, you must purge and dry the Stomach with Aloetick Medicaments: *Pilulæ Alephanginæ*, *Rudij*, *Ruffi*, are good in this Case: *Elixir Proprietatis* dries admirably: here are also commended *Frankincense* and *Mastic* taken in Wine; Meats well sawced with Mustard, and the *Species Diagonalæ*. § 4. If it be caused by other Diseases, as Obstructions of the Lungs, Liver, Spleen, Worms, Scurvy, Cachexia, Dropsy, &c. It is remov'd by curing those Diseases.

XLVII. Aphthæ, Exulcerations of the Mouth called the Thrush.

§ 1. In the general cure you must evacuate the Antecedent cause, prescribe a purge agreeable to the humor abounding, use Clysters, Cups with scarrification, put Horse-leeches behind the ears and under the chin, and a Vescatory to the Neck if need be. § 2. If the Ulcers are surd and foul, called in Greek *Nomai*, wash with Sugared water or Hydromel made a little acid with Oyl of Vitriol: The green water is here of singular use; so also *Diaclyma ad Gingivias*, ad *Scorbutum*, ad *Inflammationes*; *Gargarismus de Prunella*, *Sambucini*, de *Glycyrrhiza*, *Lactis Myrsichii*, & de *Auricula Jude Myrsichii*.

§ 3. If the Ulcers are inflamed, the aforesaid *Gargarismus ad Inflammationes*, & de *Prunella*, as also *Diaclyma frigidum*, are very proper: the juices of Nightshade, Hou-sleek, and Purslane, with a little *Sal Prunellæ* or crude Alum

dissolved in them, prevail much. § 4. If there is no Inflammation the chief and only remedy is Spirit of Vitriol or Sulphur, which may be used alone to men, upon a little lint at the end of a stick, gently touching the part, by which it will be presently cured. But to Children mix the Spirit with a little Honey of Roses, that it may not be very sharp, and with Lint as aforesaid touch the Ulcers. § 5. If the Ulcers be painful and will not be eased by what is before prescribed, you must use Narcoticks, which will ease the pain and stop the flux. *Riverius in Prax lib. 6. cap. 5.* saith, That he once saved a Childs life of four years old with one grain of *Laudanum*, when his Jaws and Tongue were deeply ulcerated with humors flowing continually to his Mouth, lying Night and Day without any rest. § 6. If the Ulcers (in Children) proceed from the Breast Milk, being too hot, sharp, or salt, the Nurse must be changed, or eat good Diet, and cooling things, as Apples, Pears, Quinces, Medlars, Servicees, Lettice, Purslane, &c. avoiding all sharp and salt things and Pepper: to the Ulcers apply Syrup of Mulberries mixt with Honey of Roses, or Oxymel, or honied Vinegar, to which if need be, you may add a little Burnt Alum. See more hereof in cap. 26. se 25. § 4, 5.

XLVIII. Corrosion of the Teeth, with blackness, or other discolorings and rottenness.

§ 1. In order to the Cure, the Antecedent cause is first to be removed by generals: if it comes of

evil humors in the Stomach, they must be discharged, and the Distemper of the parts corrected, that so the flux of humours may be stoppt.

§ 2. The putrid humidity must be taken away by decoction of Capers-roots, Bay-berries and Gallia Moschata; and if the Tooth be hollow, let it be stoppt with Mastich. § 3. The corruption must be carefully taken away and prevented by cleansing of the Teeth, and scaling of them, if need be, and washing the Mouth with red Wine. The Odontagick of Crollius gr. j. wrapt up in Cotton, and put upon the Tooth is good: Or the Balls of Trallianus, thus made: R Myrrh, Storax Calamita A. ʒj. white Pepper, Saffron, Galbanum, Thebian Opium. A. ʒj. Honey of squills, q. s. make little Balls, to be put into the Tooth. But Riverius commends Spirit of Sulphur or Vitriol above all things, for that they make them white, cleanse, and keep them from rotting above all other things. Dip a little stick therein, rub the Teeth with the end thereof, and then wipe them with a rag: In a great foulness you may use the Oyls by themselves: otherwise they ought to be mixt with Honey of Roses or fair water, and so Cotten may be dipt in them and put into the Hollowness. Ashes of Tobacco are very good: Or this, R roots of snakeweed, Alum, white Coral, Ana, make a fine powder to rub the Teeth with: Or this, R Plantane water ʒxij. burnt Alum ʒiij. whole Cinnamon ʒj. boyl them in a glass gently, and wash the Teeth with a

Cloth therewith, every Morning and Evening. § 4. If there be Worms therein, they are to be drawn forth by Pellets made of Henbane-seed, Onions, and Garlicke, with a sufficient quantity of Goats suet.

An Appendix concerning Fistula's of the Teeth.

§ 5. These are seldom ever cured unless the Tooth be wholly pulled out by the roots, which that it may be the better done, let it be anointed with the fat of green Frogs living in Trees: Or little Pellets of juyce of Tythimal, and Ammoniacum may be put into the cavity or hollowness thereof: Or it may be anointed with the dissolved Vnguent of Gum Ammoniacum, and Seeds of Henbane; but here you must observe that the other Teeth be guarded with a Defensative, least that they should be touched with the Medicine; and that the Spittle be not swallowed, but the Mouth be kept open to let it fall out.

Concerning the Looseness of the Teeth.

§ 6. The Looseness of the Teeth, whether it be caused by External force, as a blow or fall: or by too much humidity loosening their roots, is to be cured only by Styptick and Astringent Medicines. R red Wine a pint, Acorus ʒj. burnt Alum, Galls, Acacia, A. ʒss. boyl them a while, strain, and wash the Teeth therewith twice a day: so also the Deco-

tion of Capers, Seafern, Myrtle leaves in red Wine with Oyl of Sulphur is very good: but Vitriol, Pomgranate peels, and Flowers, must be carefully avoided, because they make the Teeth black. § 7. If it be caused by the Sparwy, you must have respect to the Cure of that Disease: if it comes from an old age, it is incurable.

XLIX. Nigredo, blackness of the Teeth superficial.

§ 1. The Internal cause if any be is to be taken away by Universals, as Catharticks and Emeticks proper to the humor abounding, and opposite to the Cause of the Disease. § 2. Outwardly, you must cleanse them with proper Dentifrices, as Pulvis ad Dentifricia in our Pharm. lib. 4. cap. 21. sect.

§ 2. Or with that of Clossius there mentioned; Or with this. R roots of Althea, and Ilirian Flower-de-luce, Ana. boyl them in Water with Alum, and Sal Gem, A. q. s. after which thoroughly dry them in a Furnace, and make them into fine Powder, which mix with a few Grains of Musk. § 3. You may also make Dentifrices of the Thigh Bones of an Ox or Sheep, Or of the Jaw-bones of a Pike, well calcined: Or of white Coral and Date stones, Bones of the Turtle, Eggshells and Harps-Horn Burnt, &c. but nothing exceeds the Oyls of Sulphur and Vitriol formerly named.

L. Excrecence of the Gums.

§ 1. Gently evacuate the noxious humor, and make revulsion by Cuppings, Vesicatories, Issues, application of the Seton, Scernuradu-

ries, Errhines, &c. § 2. Outwardly (if there be no putrefaction present) apply Astringents, viz. burnt Alum, Sal Armonjack, Mastich, Frankincense, all of them reduced into a very fine powder. § 3. But if there is present a Putrefaction, then you must use the Green-water (which we have described cap. 26. sect. 6. § 7. foregoing;) as also an Unguent of the Herb Celandine: Or this which is singularly useful; R fine Powder of the Leaves of Celandine, Sage, Spear-mint, Nutmeg, A. ʒss. burnt Alum ʒj. pure Honey ʒiv. let the Honey be despumated or clarified, and whilst hot mix the Powders therewith, with which anoint the Luxuriant flesh.

An Appendix concerning the Erosion and Exulceration of the Gums.

§ 4. The Antecedent Cause and Vicious humors are to be evacuated by purging: the hot and sharp humors are to be tempered with Apozems, cooling Juleps, Broths, &c. the Flux is to be diverted by Cuppings and Cauteries rightly applied: And the faults of the parts are to be corrected, and the parts themselves strengthened. § 5. The next thing to be done is the application of Topicks, which are to be altered according to the greatness and nature of the Disease: to a simple erosion you must apply only those things which dry and astring: R of unripe Galls, Acorn cups, Sumach, Myrtle leaves, A. ʒj. Alum ʒss. boyl them in forewater pāj. Old red Wine, p. j. with which every

every day Morning, Noon, and Night wash the Gums. If it will not do, you must add to the former white Vitriol ℥j. if yet it be not taken away, apply this, *R. Sanguis Draconis ʒij. Lignum Aloes, red Roses, Spodium, burnt Harts-horn, Cypress Nuts, Myrrh, Tobacco Ashes, Alum, A. ʒj.* make all into fine Powder which mix with Honey, and a few Drops of spirit of Vitriol or Sulphur: spread it on a linnen Cloth, and lay it upon the Gums at Night. § 6. If withal there be a Rotteness of the Gums, you must use the Spirit of Vitriol or Sulphur, either alone or mixt with Honey of Roses, or water, as we have taught at Sect. 48. § 4. foregoing. § 7. If the Ulcer is foul and deep, you must anoint it with Balsam, Oyl, or Liqueur of Myrrh per deliquium: if all hetherto spoken do no good, if the Tooth near the Ulcer be rotten, you must pull it out, and then the malady will quickly be well.

LI. Inflammation and Ulcers of the Tonsils.

§ 1. This Inflammation is cured altogether after the Method of other Inflammations, yet this notwithstanding is to be observed, that by the too frequent use of Coolers and Repellers, the Tonsils are

made the harder, which is a matter of ill consequence. § 2. The cure ought to be directed to the several Causes, let them be what they will: and therefore in Girls, and Women kind, where there is an Obstruction of the Menstrua, they ought with all speed, and potently to be provoked: See the Care of a Quinsy at Sect. XXV. from which this Cure differs not much. § 3. In an Ulcer of the Tonsils, you may follow the method of the Cure of other Ulcers of the Mouth, which we have taught in cap. 26. sect. 25. § 4. 5. and in this present Chapter at Sect. XLVII. and Sect. L. § 4, 5, 6, 7. above. § 4. But some much commend in this Case the Liqueur Mercurij sublimati, and the Liqueur Salutis (in Our Pharm. lib. 4. cap. 11. sect. 24 and 25.) but of Our Aqua Ophthalmica we have had many and great Experiments. If these things do not there is a necessity of touching them with the Oyls of Vitriol or Sulphur: and then afterwards to apply the stronger sort of astringent Medicaments, for as much as that these kinds of Ulcers are very Subject to creep farther and farther, by reason of the Spittle, and natural moistness of those parts.

CHAP.

CHAP. XXX.

Of Diseases of the middle Ventricle.

I. *Bñz, Tuffis, The Cough.*

§ 1. The Cure has respect to the Cause from whence the Cough arises: Or to the Cough itself, if it be vehement: which is either moderated by Lenifiers or Anodyns: Or taken away by Narcotics, as Syrup of Poppies, Diacodium, Mithridate, Venice Treacle, Philonium Romanum & Persicum, Our New London Treacle, Laudanum Nostrium, and that of Paracelsus, *Pisule de Cynoglossa Confectio Anodyna.* § 2. If it be from External Causes, it is cured by taking away the Cold, which you may effectually do by sweating with a *Carduus posset*: and the next night going to Bed taking ʒi of Mithridate, drinking a little glais of Sack after it. § 3. If it be from Causes Internal, where vitious humours are contained in the Lungs, you may purge with *Agarick* in Tincture mixed with *Oxymel* of Squills: Or the *Flegm* being first prepared with *Syrupus Acetosus*, you may cleanse the Breast and Lungs with *Vinum & vel Benedictum*, giving after it several times *Diacassia*: then exhibit *Liquor* of Sugar, or *Elixir Proprietatis* in a proper Vehicle. § 4. If it be from a thin humor, you must first use universals, then such things as incrassate, or thicken, and lenify, as Syrup of Jujubes, of Comfrey, of Corn Poppies, Dia-

tragacanthum frigidum, Confectio Anodyna, Laudanum Paracelsi, Trochisci Beckici to hold constantly in the Mouth: After comfort the Lungs with *Syrupus Succorum*, Tincture of Sugar or of Spanish juyce of Liquorice, or extract of Elecampane. § 5. If it be from a Vapor or Wind, you must use those things which remove the Cause, and make a Revulsion of the Vapor: we commend upon Our own experience the Oyls of Aniseed, and of Fennel seed: the Quintessences of Juniper-berries and of Carraways: as also Our *Quinta essentia Virtutum.* § 6. An Observation out of *Riverrus lib. 3. obs. 231.* A Woman eight months troubled with Pain of her Shoulders and Arms, with a straightness of her Breast, difficulty of Breathing and a Cough, bringing up much *Flegmatick* and Watery matter, was cured with this: *R. Calomelanos ʒj. Diagridium ʒss. make them into a Bolus with Conserve of Roses*: the next day she was Cured: yet 3 days after, she took the same again, and was freed from all the aforesaid Symptoms, after that many things were given by other Physicians in vain. Another Observation. I cured one *Nicholas Earl* of a most vehement Cough, shortness of Breath and difficulty of Breathing only with Oyl of Sul,

Sulphur, which was drop into all his Drink, every day till he was well, which was in about a weeks time.

II. *Aqua, Asthma, Difficulty of Breathing.*

§ 1. The Cure is to be considered either in the fit, or out of the fit.

§ 2. In the fit, the Cure is to be directed both to the antecedent and conjunct causes.

§ 3. The Antecedent cause is to be taken away first by evacuating of the predominant humor, which is best done with Potions: if it be Flegm the Tinct.

Phelegmagoga Grulingij is excellent: But if the Flegm is viscous,

give over Night *Oxymel Simplex*: the next morning give a Vomit

of *Sal Vitrioli*, or of the Infusion of *Crocus Metalorum*: after which

you may purge with Infusion of *Agarick* and *Sena*: *Riverius* saith,

That the fit is sometimes taken away with a Vomit only: and

he commends as chief *Aqua Nicotianæ* ad \mathfrak{z} j made into a Syrup with Sugar.

Platerus advises to the juice of Blew Flower-de-

lucæ ad \mathfrak{z} ss. mixt with *Hippocras* \mathfrak{z} j. which if it works not, you

may give ad \mathfrak{z} ij. § 3. For Revulsion, you may use sharp Clysters

often; Frictions to the Inferiour part and Cuppings thereupon: Or

a Vesicatory to the hinder part of the Head.

§ 4. What remains to be done is, that you extenuate and resolve the thick humors, and dis-

solve the Vapors which stick in the Luegs. For this purpose Authors

have heaped up a vast number of Medicaments, but this following

we commend to you upon our own Experience, as much transcending them all: \mathfrak{R} *Cinnamon*

water \mathfrak{z} vj. *Quiescence of Aniseeds*,

Tincture of Spanish juice of Liquorice,

Oxymel, *Syrup of Violets*, *Rose-water*,

Plantane-water, *A.* \mathfrak{z} j. *Oleum Tartari per deliquium* \mathfrak{z} iv.

Spirit of Sal Armoniac \mathfrak{z} ij. *Volatile Salt of the same* \mathfrak{z} j. mix them,

of which let the Sick take a spoonful at a time in a Glass of

Canary five or six times a day.

§ 5. While this is in doing you must use Expectorators. which bring

forth the thick matter upwards, for which we commend to you our

Pectoral Infusion, as a most admirable thing.

§ 6. If the cause of the Asthma be a Catarrh: Our

compound pectoral Infusion (generals being first premised) is of an

absolute necessity, which may be taken to one spoonful in a Glass

of Canary: so also the Compound Balsam of Sulphur, and

the Anisated Balsam of *Rulander*. Or this: \mathfrak{R} *fine Powder of Ele-*

campane, *powder of Liquorice*, *Sugar candy*, *A.* \mathfrak{z} ij. *Syrup of the juice*

of Liquorice, *Syrup of Horehound*, *of Hyssop*, *A.* \mathfrak{z} j. *Flowers of Sulphur*

\mathfrak{z} ss. *Ginger* \mathfrak{z} ij. mix all together, and with Marmalade of Quinces

\mathfrak{q} . s. make an Electuary, to be taken three or four times a day.

§ 7. Out of the fit, your first endeavour must be to stay the Defluxion,

which you must do by those things which we have appointed in the

cure of a Catarrh: where note, That your Syrups and Apozems

be not made too hot and dry, least they consume the thin

parts, and leave the thick behind; but mix with them Rai-

sons, Figs, Juubes, Dates, Liquorice: and instead of Cephalicks you must mix Pectorals:

You

You must make Derivation out of the Head by Errhines, Sternutatories, Gargarisms, &c. but this last is not so proper. § 8. Secondly, you must open the Obstruction, by that composition mentioned in § 4. foregoing; Juice of Radish roots with Tincture of Sugar is excellent. The Spirit of Sulphur or Vitriol doth open the Bronchia of the Lungs, and dissolve the stimy Flegm, being taken a gut. iv. ad x. in Beer, Ale, Wine, Broth, or Syrup. § 9. Thirdly, you must separate and dissolve the matter by such Medicines which do moderately cut and divide, and have in them a natural humidity, which you must often change, lest they become habitual. To this Intent Oyl of Angelica is commended: Quercetans Oxymel and Syrup of Tobacco: the Decoction of Jael, of Zedoary, Gum Ammoniack, Flowers of Sulphur and Saffron: Grulingius his Oyl of Sugar: Oxymel Scyllitick with Syrup of Violets: Or this, R. S.V. ʒvj. Elecampane roots ʒiij. Spanish Tobacco ʒj. infuse twelve hours, strain, and add fine Sugar, and Syrup of Erysimum or Coltsfoot, A ʒiij. Oyl of Sulphur enough to make it sharp: mix them for a Lohoch. § 10. Fourthly, you must make Evacuation with Aqua Asthmatica Frankfurti. The Tincture of dry Tobacco drawn with S.V. and mixed with a little Honey as big as a Pea or Bean, being held in the Mouth, and swallowed by Degrees draws Flegm in abundance from the Stomach and Lungs, ʒi Vitrioli doth here take place, and those things which we have

mentioned at § 3. foregoing. § 11. Fifthly, you must dry and strengthen the parts with this. R. Flowers of Sulphur ʒj. Benjamin ʒj. mix and give ʒj in a rare Egg for certain days: 10 also Lac Sulphuris given often in the Morning, sharpening all their Drink with Oyl of Vitriol or Sulphur: the Decoction Sandicum has place here. Oyl of Sugar doth powerfully dissolve viscous humours in the Lungs. Or this: R. Oyl of Sugar ʒiij. Quintessentia Virtutum ʒj. mix, and give half a Spoonful at a time in Sack. R. White Wine ʒiv. Millepedes, N^o. xij. put them into a Linnen Cloth: Infuse forty eight hours, strain and give it to Drink, this in a short time perfects the Cure, for they Dissolve much: the Decoction of red Coleworts sweetned with Sugar is profitable here: but their Juice mixt with Sugar of Roses or Syrup of Colts foot, and taken for many days is much better. R. Turpentine washed ʒij. fat figs ʒiij. Pernids ʒiv. Oyl of sweet Almonds ʒj. mix them, but it will be better if the Turpentine be first opened with the yolks of four or five new laid Eggs. Dose half an Ounce Morning and Evening. A Cock-Broth: R. an old Cock, and stuff him with these things: dried Fox Lungs, Raisons stoned, Figs, A ʒij. Elecampane, Carthamus seeds, Polypody, A ʒj. dried Hyssop, Savory, Horeboud, Time, Calamint, Pennyroyal, Cremor Tartari, fresh Butter, Salt, A ʒis. yolks of Eggs N^o. ij. Fennel and Aniseed, Flower-de-luce roots, A ʒiij. cut, bruise, and sew them into his Body, which

which boyl in water ℥xvj, till his flesh comes from his Bones: strain, and put to it of clarified Honey ℥x. that it may keep, of this let the Sick take half a Pint every Morning, Noon and Night, in which let him dissolve, Manna and new drawn Cassia, A. ℥ss. or less, according to the strength of the Sick, and so take it for a month or six weeks together: this Broth is full of Nitrous parts and performs Wonders. *Brumerus* his Portion. R. *Hyssop water* ℥iv. *Rhenish Wine* ℥ij. *Ammoniacum* ℥j. dissolve the Gum and drink it up. § 12. Lastly, Anoint the Stomach well every night with *Balsamum Stomachicum*, which see in Our *Pharm. lib. 4. cap. 4. sect. 24.*

III. Πλευριτις, Pleuritis, The Pleurisy.

§ 1. The Indications of Cure are four fold: First the humor causing the Disease is to be revelled, derived, and discussed: if it cannot be discussed it must be digested, matured and expectorated: Secondly, the pain is to be mitigated: Thirdly, the Fever is to be removed by proper Medicines: Fourthly, the parts and natural powers and vigor of the Body are to be corroborated and strengthened. § 2. For Resolution, Physicians commonly prescribe Blood-letting: some will have it on the Arm of the side affected; others in the Arm of the opposite side, which as they say is to be moderated in the beginning of the Disease, that it may be iterated afterwards the more safely: But some Physicians affirm, That a Pleurisy tho' malign or Epidemical, may be

cured at any time without Blood-letting, which Truth is taught by most firm reasons, Authority and Experience: and that several Pleurisies have been cured more easily and sooner without Blood-letting than with it. The Experiment, I first tryed upon my own person, having an Exquisite Pleurisie wherein the violence of the Disease was perfectly overcome in less than one hours time; and since that time have tryed the same with as good success in more than thirty several persons, all which recovered without taking away of one drop of Blood. The Secret is a Resolutive of great force, viz. Spirit of Sal Armoniack, which may be given thus. R. Syrup of corn Poppies ℥j. rectified spirit of Wine ℥ss. spirit of Sal Armoniack, gut. xx. mix them for a Dose, which may be repeated Morning and Night: In the Intervals give this. R. Cinnamon water, Rose-water, or rather Poppy-water, A. ℥iij. spirit of Sal Armoniack gut. xxv or xxx. mix, and exhibit now and then a spoonful, by this means the Sick will have sudden and infallible relief: I knew an Emperick once or twice do this only with gr. iij. of Laudanum dissolved in a glass of Canary and so drunk up. Others have done it with dulcified spirit of Niter, or with this. R. spirit of Niter. S. V. A. ℥ss. Poppy water ℥ij. give it Blood warm. *Angelus Sala, Hartman, Faber, Rulandus, &c.* do it with Vomits given in the beginning, by which there is also made an excellent derivation, and this Vomir is chiefly A-

Aqua Benedicta with the Water of Mary's Thistle or of Corn Poppy. § 3. For Topical Discussives, some commend a Cataplasm of Nicotiana, others the Unguent thereof mixt with Oyl of Caraways, laying over it a Colewort leaf: and afterwards *Emplastrum de Galbano Crocatum*. Or anoint with *Oleum Hyperici* simple or compound; Or with Oyl of Camomil mixt with Oyl of Lillys; or with *Balsamum Sacrum*: Or Ung. *Rutaceum*: if the Pleurisy be malign or pestilential, mix with the aforesaid things Oyl of Scorpions of *Mathiolum*, or some Venice Treacle: Some foment the part with S.V: Others anoint with *Unguentum de Althæa*. Barbet commends this, R Ung. de *Althæa compositi*, pectoral Oynment, A. ʒss. Oyls of Poppy seeds and of white Lillys, A. ʒiij. Oyls of Myrtles and of Roses, A. ʒvi. mix them: this he used in the beginning, and (the matter being suppurated) the Plaster of Cummin or of Orrice, excellent things in Diseases, of the Breast. Decker saith, That this following excels. R Ung. de *Althæa compositi* ʒj. Oyls of sweet Almonds, of Roses, A. ʒij. Oyl of white Lillies, and of Poppy and Henbane both expressed, A. ʒjss. Oyls distilled of Camomil, of Cummin, of the Philosophers, A. ʒss. Camphir ʒss: mix and make a Liniment. The Plaster of Orrice aforesaid: R *Diachylon magnū cum Gummi* ʒj. powder of Orrice root ʒij. distilled Oyl of Camomil, q. s. mix and make a Plaster. The Plaster of Cummin. R *Diachylon cum Gummi* ʒj. Powder of Cummin-seed ʒij. distilled

Oyl of Caraways q. s. mix for an Emplaster. The hot Paunch of a Sheep is a good Anodyn and discussive, but the Lungs laid on hot are better. Chymical Oyl of Wax mixed with *Unguentum Martiatum* or *Rutaceum*, is a powerful Anodyn and Discussive, so also Bread hot out of the Oven, moistned with Oyl of Aniseeds, and applyed as hot as may be endured. Riverius orders the *Emplastrum Sulphuris* with Bayberries. § 4. For Inward Discussives, scarcely any thing exceeds the spirit of *Sal Armoniac*, and Volatile Salt of the same, aforesaid; dulcified Spirit of Niter, *Spiritus ex tribus* in Poppy water, Tincture of Corals, Tincture of Tartar, and of Antimony which last is a powerful thing. § 5. If you perceive that the matter will not be discussed, you must endeavour suppuration, by giving inwardly *Decoctum Sanctum* with Flowers of Antimony ʒj plus minus, for so long time till the Apostem is ripened and broke: applying outwardly a Plaster of Pitch with Leaven and Hens dung: or anointing with *Unguentum de Althæa*, to apply *Emplastrum Diaphysurum Rulandi*: Or those of Orrice or Cummin afore described. But it may be best broken with a Cataplasm of the Herb *Kali*, roots of White Lilly, &c. § 6. The mitigation of the violent pain is now to be considered. This may be done with Anodyn fomentations made of a Decoction of Mallows, Violets, Parietary, Camomil, Melilot, and Elder leaves, mixt with a third or nearly a half part of S.V:

S.V. then anoint with *Unguentum de Althæa* mixt with distilled Oyl of Camomil or Dill and a little Camphir upon which put a Colewort or Cabbage leaf anointed with Oyl of sweet Almonds. Inwardly, you may give this, *R* Hyssop water $\mathfrak{z}\text{ij}$. Fennel water, Syrup of Corn Poppies, *A* $\mathfrak{z}\text{ij}$. Treacle water, Prophylactick water, *A* $\mathfrak{z}\text{ss}$. Crabs Eyes powdered, Bezoar Mineral, *A* $\mathfrak{d}\text{ij}$. spirit of Sal Armoniack, gut. xv. Laudanum, gr. ij. mix them, and give every hour a spoonful or two : Or this, *R* water of Carduus and Hyssop, *A* $\mathfrak{z}\text{ij}$. Treacle water, Prophylactick water, syrup of Corn poppies, *A* $\mathfrak{z}\text{ij}$. powder of Crabs Eyes $\mathfrak{z}\text{ij}$. Bezoar mineral $\mathfrak{z}\text{ss}$. Laudanum, gr. iij. mix them : Or this of Barbet : *R* Plantane and Rose water, *A* $\mathfrak{z}\text{ij}$. syrup of wild Poppies $\mathfrak{z}\text{ss}$. clarified juyce of Dandelion $\mathfrak{z}\text{ij}$. prophylactick water $\mathfrak{z}\text{ss}$. powder of Crabs Eyes $\mathfrak{z}\text{ss}$. mix them : give a spoonful or two every quarter of an hour, you will admire its effects : Or this, *R* syrup of Althæa, syrup of Corn poppies, *Diasodium*, *A* $\mathfrak{z}\text{ij}$. prepared Crabs Eyes $\mathfrak{z}\text{ij}$. Bezoar mineral $\mathfrak{d}\text{ij}$. mix them, and give it continually. Or this : *R* Salt of self-heal $\mathfrak{z}\text{ij}$. powder of wild Poppy flowers, red Coral, Burdock roots, *A* $\mathfrak{z}\text{ij}$. sugar of Violets $\mathfrak{z}\text{ss}$. mix and make a Powder for three Doses, drinking after it a little Carduus water. Riverius has often given Laudanum gr. j. (in the begining of the Disease) with good success: if it be dissolved in Spirit of Carduus Mariæ, it will be so much the more powerful. § 7. The removal of the Feaver is done

by giving prepared Coral often to $\mathfrak{z}\text{ss}$ or more : you may exhibit a cooling Juleb of Barly water, Syrup of Violets, and a few drops of Oyl of Sulphur or Vistriol : and if it be very sharp you may give an Emulsion of the your greater cold seeds, *A* $\mathfrak{z}\text{ss}$. Lettice and white Poppy seeds, *A* $\mathfrak{z}\text{ij}$. Decoction of Barly and Liquorice $\mathfrak{f}\text{ij}$. Syrup of Violets $\mathfrak{z}\text{ij}$. this will serve for three Doses. Some give Narcoticks, as *Philonium Romanum*, Laudanum, Syrup of Poppies, &c. but they ought to be given in small Doses. § 8. If the Cough be violent, and nature begins to evacuate by spitting, you must give Pectorals : chiefly Decoctions and Infusions, that so spitting may be facilitated, enough of which you may find in their respective places : if the spittle be thick, you must mix attenuating and cutting Medicines, as Syrup of Colts-foot, Liquorice, Oxymel Simplex, powder of Orrice, &c. § 9. If the Hemorrhoids or Terms be stop't against Nature, you must forthwith provoke them : the first by Leeches, the other by the Tincture of Gum Guajaci, or Tincture of Antimony. § 10. In the Declination of the Disease you may purge with the Tincture of Sena, or the Catholick Tincture of Grulingius sweetened with syrup of Roses, and if the pain continue you may apply Cupping glasses to the part with scarrification two days together but you must be sure to repeat the exhibitions of spirit of Sal Armoniack : Or give this, *R* Hempseed $\mathfrak{z}\text{ij}$. bruise it well and put to it white Dung of a Horse, *A* $\mathfrak{z}\text{ss}$. dissolve in Carduus

daus water ʒv. strain, and drink it up. § 11. If a Diarrhœa come upon a Pleurisy; it is dangerous in this case give Syrup of Myrtles, which stops the Flux and expectorates; astringent Clysters with yolks of Eggs dissolved in them: and after all let the Sick drink Chalybeated Milk, unless a Fever prevent. § 12. To strengthen the parts give often Our Confect of Alkermes, and in especial the powder of Coral, for it is an admirable thing; so also Syrup of Coral, and Our Quintessentia Virtutum. § 13. Barbet commends the following things in general, for the Cure of a Pleurisy: Roots of Birthwort, Burdock, Yarrow: Herb and juices of Dandelyon, Pimpernel, Coleworts, Carduus, Camomil. Chervil, wild Cammin, Horseroughe, Lungwort, Scabious: Flowers of the Box-tree, wild Poppies, Stachas, Citrons, Violets: Seeds of Carduus, Ash, Mallows, Nettles, Columbines, Frankincense, Hartshorn, Boars Tooth: Bone of Carps and Petches, jaw of a Pike, Crabs Eyes, Bone of a Wolf: Pizle of a Hart and of a Bull, *Sperma Ceti*, Unicornis Horn; Salt of Self-heal, of Coral, Liquor of the Birch-tree, Horse-dung, Treacle water, Prophylactick water, Spirit of Tartar, Syrup of Carduus, of Poppy, *Diacodium*: Oyls of Myrtles, of Roses, of Almonds: The Pectoral Ointment of Marsh-Mallows: Plaster of Orttice and Cumin: Antepilectick Tracea of Quercetan: Diaphoretick Anrimony, Bezoar Mineral: flowers of Sulphur. § 14. But among

the number these following are said to be specifics, *Unguentum Potabile*: the Blood of a He Goat (taken from him in Gelding him being first hung up by the Horns and his hinder Leggs bent backwards to them,) dried in the Sun or an Oven: ʒj of it is said presently to allay and cure the Pleurisy: Mistletoe of the Oak given to ʒj. The shavings of a Boars Tooth: Ashes of Bulls or Deers Pizle: red Poppy flowers, red Coral prepared: Salt of Nettle and Carduus: Volatile Salt of Harts horn, Amber, Urine, Soot, of Sal Armoniack: sweet Spirit of Niter, Compound Spirit of Niter and Tartar, Spirit of Sal Armoniack: *Laudanum nostrum* & *Paracelsi*: flowers of Box-tree, which do so much purge the Blood; that ʒj of them given in Powder in Poppy water, is said to restore the sick: *Ens Veneris*, Horse-dung dissolved in Carduus water and strained: white Hen-dung given ad ʒj in the same, Soot given to ʒj. Spirit of Soot, Spirit of ground Ivy, given with its own Salt. Decker saith, That there is scarcely a better Medicine than the Syrup and Decoction of Tobacco, given towards the end of the Disease: but the Syrup ought to be well prepared and depurated by digestion some days, or else it bringeth very grievous Symptoms. § 15. Lastly, during the whole time of the Disease, let the Sick take Barley water for his ordinary drink, made with Liguorice, Poppies and Maiden hair, which let him drink warm: Wine in this Disease is as bad

bad as Poyson, and all things which cause Coughing.

IV. Πνευμονία; Peripneumonia, Inflammation of the Lungs.

§ 1. The Cure of this Disease differs little or nothing from the former, and is to be performed for the most part with the same Medicines: yet these following Notes are to be observed. § 2. First, that Cupping Glasses may be applied to the Back and Shoulders both with and without scarrification, as much as the Sick can suffer: as also to the Thighs. § 3. Secondly, Emollient Clysters may be given for Revulsion: but beware of too strong purging Medicines, least they cause a Flux, which is the most dangerous Symptom in this Disease. § 4. Thirdly, if a Flegmatick humor falling from the Head, causes this Disease, you may apply Vesicatories or a Seton to the Nape of the Neck. § 5. Fourthly, you may exhibit Vinum Benedictum, as a thing chiefly beneficial, and by some very much commended: and afterwards give Lapis Prunellæ in some proper Vehicle: Or a dose or two of Spirit of Sal Armoniack in Poppy water. § 6. Fifthly, that you anoint the Stomach with Oyl or Balsam of Amber, and provoke Spitting with Syrup of Violets, and Jujubes, or other things of like nature. § 7. Sixthly, purge gently, but only in declination of the Disease, and in all other things follow the Directions which we have given in the former Section of the Pleurise.

V. Εμπύημα, Empyema, Abscess and Ulcer of the Breast.

§ 1. The Cure of this Disease has four several Indications, First the perfect maturation, which may be done by some of those things mentioned cap. 24. sect. 1. § 5. and sect. 2. § 5. foregoing, being outwardly applyed: and also by giving inwardly good Pectoral Drinks mixt with Ponder of Flower-de-luce roots. Venice Turpentine washed with Barly water, and given to Zij with Ponder of Liquorice, is wonderful good. § 2. Secondly, the breaking of the Aposteme, which is done by the eating of Salt Meats; frequent reachings and spittings. But if it will not be spit up (as sometimes it will not) you must open it between the fourth and fifth ribs, or rather between the fifth and sixth ribs, as we have taught cap. 15. sect. 20. of this Book: This is best done before the Aposteme breaks, and lets forth the Pus into the Cavity of the Breast, which is known by the Tumor against the place of Suppuration, and others signs of an Empyema: and in this Case you must not open it between the aforementioned Ribs, but in the very middle of the Tumor, first applying a Caustick: if the Tumor appears not, it will be hard to open it before the Aposteme be broken. § 3. The Evacuation of the Pus or matter: and herein you must have an Eye upon natures motion, viz. whether upwards or downwards. Spitting may be well procured by Oyl of Sulphur and Spirit of Turpentine; mixed together, and mingled with a Pectoral Decoction, Juices of Ground Ivy and of Horehound.

hound made into a Lohoch with Myrrh, Frankincense and sugar Penids: are much commended: as also Decoction of Ebony, and Syrup of Crab-fish. Outwardly (the Breast being opened) if the matter does not flow freely, you must draw it forth with this Emplaster: *Rx pine Rosin lbss. Oyl of Bays, Turpentine, A ʒi. Gum Elemi ʒij.* first melt the Rosin and Gum, then add the Turpentine, and the Oyl; boyl a little, strain, and make an Emplaster. § 4. *The strengthening of the parts: and this is done by pectorals mixed with abstersives: afterwards mix with moderate astringents and Cordials.*

An Appendix concerning a Dropsy of the Breast.

§ 5. *It is a Disease hard to be known, having all the signs of an Empyema: a noise of water may be heard in the Breast, if the Body be moved too and fro: there is a pain in one Arm or Shoulder, with a Fever, Cough, and short Breathing, the Feet swell, the Nails are contracted, and there is at every first beginning to sleep a great difficulty of Breathing which hinders it.* § 6. *It is a great Disease and hard to be cured, often degenerating into the Dropsy Ascites: while it is in beginning before the Bowels are much hurt, it is curable.* § 7. *The Indication of Cure are twofold; 1. The Evacuation of the water out of the Breast. 2. The taking away the Morbifick cause, viz. to prevent the Breeding of it again.* § 8. *As to the first Indication,*

Hippocrates advises, to open the side, as we have taught in the place aforecited: but if the Sick will not admit of it: you must give Medicines which expel water, viz. all such as we have prescribed in the Cure of the Dropsy: but this observe, that you give no violent Hydragogues, least the humours being much moved, the Sick should be suffocated: be wary, and give them in less Dose, and oftner, mixed with strong openers, Diureticks, and oily Bodys, such as Oyl of Sweet Almonds to make the passage slippery, that the water may be carried to the Ureters. Among Hydragogues, Minerals are best, such are Mercurius dulcis, and Mercurius vita, so corrected that it may work only downwards. Often give Diureticks alone as (Sal Tartari) for they are good; so also Sudorificks and Dryers: a Sudorifick Decoction of Guajacum and Sarsa taken fifteen or twenty days together is excellent, the Sick sweating in Hartmans Chair with Spirit of Wine: and Cauteries to make Issues in the Thighs and Leggs, are commended to take water from the Breast. § 9. To hinder the breeding of the water, some of the former Operations are good, as gentle purging, using Diureticks, Sweating, and Issues, because they divert the humor, and carry it another way: but the chief thing is to amend the faults of the parts which send the Water; as to open the Lungs by Pectorals and abstersives, and taking away the Obstructions of the Liver and Spleen, if any be, and then strength-

strengthening their tone by dryers, and other things prescribed in the Titles of the Droply, and Distemper of the Stomach, Liver, and Spleen.

VI. *Αιμορρῳα*, Hæmoptysis, Sputum Sanguinis, spitting of Blood.

§ 1. In the Cure of this Disease, we have three principal Indications: 1. Revulsion of Blood from Lungs. 2. Correction of the evil quality thereof. 3. The Closing of the Vein that is opened by astringent and aglutinating things. § 2. Revulsion is performed by Cupping-Glasses with Scarrification to the Back and Shoulders: or without Scarrification, to the parts under the Ribs and the Groins: and by Frictions of the extreame parts. § 3. The evil quality of the Blood is to be corrected and cooled: This is done first by Catharticks which ought to be cooling, as Diacassia, Diasena, Surupus Succorum, or with Tinctura Chologoga Grulingij, or that prescribed in cap. 29. sect. 23. § 9. if there is a Fever, let the sick Vomit with Sal Vitrioli, or Vinum Benedictum, and then sweat with Spiritus ex Tribus: but Vomits are rejected by some as pernicious. He may also drink Whey boyled with cooling Herbs; Whey of Goats Milk is commended: so also Asses Milk steeled, drunk for six or eight Weeks together: otherwise his constant drink may be Barly water boyled with a little Liquorice and a few Coriander Seeds: but let him abandon all Wines, and hot Liquors, as things perfectly destructive: except a Glass of Canary

(and that but seldom) to be taken as a Cordial. § 4. The consolidating of the Vein is done by cooling Astringents and Narcoticks. § 5. Among simple Astringents, Knot-grass boyled in Broth and applied is approved: Decoction of the bark of Black-thorn roots, Sumach, Pomgranate rinds and flowers: Trochisci ex chelis Cancrorum, de Spodio, de Terra Sigillata, Bechici, Syrup of Corals: are said much to prevail: so also Syrups of Myrtles, dried Roses, Pulaine, Sugar of Roses with Barly water, sharpened with Oyl of Sulphur or Vitriol a Decoction of Yarrow, or of Comfry, the Blood of Comfry: Conserve of Roses and Comfry roots, but you must beware of things too astringent, least they drive the Blood from the Vena cava into the Lungs, and therefore with astringent mix things Pectoral and something Emollient, as Extract of Elecampane, Balsam of Sulphur, Oyl of Aniseeds, *Sal Prunellæ, Essentia Perlarum*. To the things above enumerated you may add these; *Species Diamargariton frigidæ, Diatrageantæ frigidæ, Pulvis Haly, Pulvis ad Cassum, Spemniolæ Crollij, Tragea Hæmatica Quercetani*, Syrups of Pulaine seed Compound, of Comfry, of Pearls, of Corals, Rob of Barberries, Marmalade of Quinces; Oyls of Sulphur and of Vitriol, *Trochisci Alkakenji, de Berberis, de Camphora, de Carabe, Gordanij, Ramich Mesæ, de Santalis*; Tincture of Coral drawn with juyce of Limons is powerful: Oyl of Amber doth pierce, astringe & dry powerfully

ly gut.ij or iij. being taken in Plantane water. *Sanguis Draconis* doth wonderfully conglutinate if ʒss be given at a time in Plantane water : so also the dried Blood of a Man, Sheep, Bull, Goat. *Amatus Lusitanus* saith; That only juyce of Nettles being drunk six or seven Mornings fasting ad ʒiv. has cured such as have been given over by all Physicians. *Trallianus lib.7. cap.1.* commends the Blood stone prepared and given ad ʒiv. with juyce of Pomgranates and Knot-grass. § 6. To the same purpose we have these singular Compounds. The Powder of Julius Scaliger. *R. Spodium, red Roses, fine Bole, Terra Sigillata, Blood-stone, A. ʒiv. Seeds of Purslane, Mallows, Ribwort, red Roses, burnt Hartshorn, starch burnt, A. ʒiij. red Coral, Amber, Pearls, A. ʒiijss. Gum Arabick, and Tragacanth, A. ʒij.* make all into a fine Powder. Dose ʒiij in rain water or red Wine. The Electuary of *Halideus*. *R. seeds of white Poppy and Henbane, A. ʒx. Terra Sigillata, red Coral, A. ʒv. Old conserve of Roses q.s.* make an Electuary. Dose ʒj. Morning and Evening. A Powder of Coral Compound. *R. red Coral, Pearl prepared, A. ʒss. Gum Tragacanth ʒiij.* make a Powder to be given in Broth. *Aqua Philosophorum* in Our Pharmacopœia is a very excellent thing. *R. Oyl of Vitriol or Sulphur gut.xij. Plantane water ʒiv.* mix them for a draught. *R. Troches of Amber ʒj. Plantane water ʒiij. Syrup of Myrtles ʒj.* mix for a Potion. Or this. *R. juyce of Purslane ʒxij. of Lettice ʒiv. with sugar ʒxij.* make a Syrup, to be often

lickt : Or this : *R. Poppy and Plantane water, A. ʒiv. Syrup of Myrtles and dried Roses, A. ʒj. Lapis Prunella ʒij.* mix for a Juleb. A Lohoch for the same. *R. red Coral ʒij. fine Bole, Terra Sigillata, Blood-stone, A. ʒj. Syrup of Myrtles ʒij. Whites of Eggs N^o.ij.* beaten with Rose water, mix them for a Lohoch. A Bolus : *R. Conserve of Roses and of Comfrey, A. ʒj. fine Bole, Terra Sigillata, A. ʒj.* mix them to be swallowed down by degrees. A Syrup : *R. juyces of Plantane, of Nettles, of Lettice, and of Purslane, A. ʒiij. with fine Sugar ʒix.* make a Syrup. § 7. But if none of the foregoing things will do, you must be necessitated to come to Narcoticks, which quiet the motions of all the humours in a wonderful manner : for which purpose we commend Syrup of Poppies. Our Laudanum, and that of Paracelsus, Liquid Laudanum, *Liquor Vitæ Anodynus, Confectio Anodyna, Pilula Anodyne, Aqua Hypnotica, Spiritus Anodynus, Laudanum Virioli, Mithridate, Venice Treacle, Our New London Treacle, Pilula Bechicæ, de Cynoglossa, Pastilli Hæmoptoici, Trochisci Diaspermaton, Diacoralion, Albi Rhafis* with Opium, *Requies Nicholai, Philonium Persicum, Romanum, and Magistrale* ; all which see in Our Pharmacopœia lately published. *R. Syrup of Myrtles and of Poppies, A. ʒj. fine Bole ʒss.* mix them to be taken at Night. Or this. *R. Syrup and of Poppies and of Purslane, A. ʒiij. Terra Sigillata ʒiij. Purslane water ʒij. Poppy-water ʒj.* make a mixture to be taken as aforesaid. § 8. An Observation

servation. Platerus saith, That he cured one only with Troches of *Alkakengi* with *Opium*, dissolved in Goats milk, being taken some days.

VII. Ἀτροφία, κατὰ νάλωσις, Atrophia, Tabes, Consumptio, A Consumptio.

§ 1. In the Cure of this Disease there are four several Indications.

1. The opening of the Obstructions that the Nurriment may be conveyed to its respective parts. 2. The stoppage of the fluxion, which for the most part falls upon the Back and Spinal Marrow. 3. The fortifying of the Stomach and of its native heat, that it may digest the Food, whereby Nature might the better assimilate the Nurriment.

4. The setting of a proper and nourishing Diet to answer all the Intentions of this Cure. § 2. The opening of Obstructions in this case is done by often Bathing in water, or decoction of the inward parts of a sheep, and by things apperitive, of which nature are Volatile Salts; Rain water, Tincture of Antimony and the Spirit of Sal Armoniack: So also some fixt Salts as of Wormwood, Centory, Tartar, Broom, Carduus, I amarrisk, Ash, Beans, &c. after this you may purge gently with such things as evacuate Choler or *Attrabilis*, that so also the offending matter may be carried off: and if the Sick seems to have a Feaver withal; let the Cathartick matter be given in Whey, and if it may be so, Whey of Goats Milk. *Ens Veneris* is commended as a most admirable thing, and we have seen very great effects by it: so also the

Juyces of Parsly, Smallage, Ground-Ivy, Bawm, Angelica, Borrage, Bugloss, *Veronica*, Brooklime, Bloodwort, Water-Cresses. § 3. The next Intention is to stop the Defluxion, which is done by rectifying the weakness and distemper of the Parts causing it: and now because in this case almost all defluxions come from the Head, you ought to take away the matter offending from, and to fortify the Brain with Cephalicks: the first is done by the *Pilulæ Lunares*, the other by Daily exhibiting *Q. Essentia Rosmarini, Aurantiarum*, or of that which is *instar omnium*, viz. *Q. Essentia Virtutum*: more over you must anoint the Region of the Back with Oyl of Amber mixt with Oyl of Bitter Almonds, and make the Sick smell often to the Powers of Rosmary, Limons, and Sage: if the Defluxion be apparent and great, it will not be amiss to incrassate now and then with Syrups of Purslane, Lettice, Poppies, &c. given in Purslane, Plantane or Poppy-water: But you must be very cautious of *Opiates* (and totally forbear them if the Sick be but inclinable to Sweat) lest they produce an incurable *Dia-phoresis*, which may bring the Sick many Weeks or Months to his Grave sooner than otherwise he would. To this purpose the Syrups of Pearl and Coral prevail much, and things which thicken by their own proper substance, as Syrup of Comfry, Conserve of Red Roses, Oyl of Sulphur and Vitriol. § 4. The third Intention is answered by the Exhibition of all such things as have

in them a great heat Life and Power : for this purpose the Tincture of Gum Guaiaci cautiously taken and in small Quantity may be good, so also Elixir Proprietatis : but we have found nothing to exceed the Tincture of Black Pepper, and the Oyl of Cinnamon : the Tincture of Black Pepper (made with S.V.) may be given five or six times a day in Cows Milk, making the Milk as hot of it as it can be endured, and this may be drunk, ten, twenty, thirty, or forty days, as need requires. R. Spirit. Angelicæ magis compositi ℥ij. Oyl of Cinnamon ℥ss. mix them, to be taken now and then upon Fainting and Illnets of the Stomach, about ℥ij. or something more at a time in two spoonfuls of the best Canary. Confectio Alkermes has here place, and is an admirable thing, so also Confectio de Hyacyntho, given in the Broth or Gravy of a Legg of Mutton. or in Cinnamon water, or in Hippocras. And to recreate the Stomach (because it delights much in change) you may sometimes for a day or two forbear the Tincture, and then give Wine and Vinegar of Squills, Syrups of Corals, Citrons, Limons, Quinces : and, if the Season of the year be, the Sick may a little refresh his Stomach with Cherries, Raspberries, Dewberries, and other like pleasant and cordial fruits : and the said Syrups and fruits may be exhibited either alone, or in Broths, made of Fowls flesh, on purpose for this occasion : afterwards he may repair to the taking of his

Tincture and Oyl of Cinnamon again : if the Sick finds his Stomach to be at any time any thing foul, he may gently cleante it with a Dole of Sal Virosoli, or Sal Tartari Emeticum Mynsichti, for by this means the Medicines afterwards to be taken, shall have so much the greater and better Operation. § 5. The fourth Intention is a fit and proper restorative Diet. It ought to be humedding and temperate : The Broth of Snails in Milk is excellent, especially if it be well sweetned with Sugar of Roses. Milk is said to answer all the Intentions of the Cure, and without doubt it is an admirable thing : let the Sick first begin with a Pint a day, and increase the quantity by degrees, till he comes to drink three gallons a day, and so continue it for three months together ; I have known three or four persons given over as incurable, cured only by this means, the Milk being taken in this excessive quantity : Goats Milk is better than Cows Milk : and Asses Milk is better than either : but the persons which we knew restored by drinking Milk, drank only Cows Milk. Chicken Broth made strong is very good, and you may once in five or six days give dissolved in it ℥ij of Manna, Or ℥j of new drawn Cassia : Platerus saith That he knew many cured by sucking Breast-Milk, by which they did not only recover, but grew very strong. If the Sick resolves to enter into the Milk Diet, let it be sweetened for a time with Sugar of Roses, lest it should Curdle in the Stomach.

Stomach : After the drinking of the Milk, the Sick may, if they so please eat Jordan Almonds and Raisons of the Sun. *Aviscen* saith, That he cured a Woman of a desperate Consumption, only with Conserve of Roses : and *Msue* saith, The same. But he advises it to be not above a year old, to be taken in great quantity, and often, both alone, and with Meat and Drink, and that it be given after cleansers and openers : to this very thing *Montanus*, *Valeriola*, *Forestus* and *Riversus* give their Suffrages. We knew a Man in a very deep Consumption cured by continually taking of a Gelly of Hogs-Foot, and of the Shoulder Joynt ; and he grew fat thereupon. Syrup of Juniper-Berries and ground Ivy are excellent in this Case, being continually taken. *Cardan* saith, That he cured many by giving Barley broth made with Water and Sugar, without any flesh in it : and every Morning the Broth of the Tails and Leggs of Crayfish to ζ iv. made in Barley water and Sugar. Others have been cured with well leavened Bread eaten with Oyl-Olive for a long time together. Syrup of Coral and Gelly of Quinces are no inferiour things, because they recreate the Stomach : Let his drink be water and Sugar, or Barley water and Liquorice : Or an Infusion of Liquorice ; Or Hydromel, Or a Decoction of China with Liquorice. The strong Broth of an old Cock (beaten to a Mash) being taken for an hundred days together, is

inferiour to no other thing : the same thing will the Broths of all land-Fowl and Birds do, for the Broth of Birds is of a very *Nitrous* and subtil Nature, and restores beyond Imagination. The Sick may also take the Broth of Capons or Hens freed from their Fat, Crabs and Lobsters, and eat freely the flesh of Oysters and Perriwinkles and to refresh the Stomach, the flesh of Fishes which swim in Gravelly places, Shrimps, Sprawns, &c. Barley Milk, Almond Milk, and Emulsions of the four cold Seeds greater and lesser, Nuts, Pine-nuts, Ground-Nuts, &c. are here very good : of Roots Parsnips and Turneps are of good Nutriment and Restorative ; and the Liquor pressed out of boyled or baked Turneps, and drunk ordinarily, is prevalent above many other things : *Eringo* roots have a great Commendation, so also the Broth of Coleworts and Cabbage : to these add the juyce of Leggs of Mutton, and of Beef not fully boyled, Gelly of Hartshorn, &c. Lastly, because that it is necessary, that the Body be now and than a little opened and cleansed, we advise to the taking of this following Stomack of *Riversius* : \mathcal{R} Pil. *Ruffi* ζ j. Gum *Gajaci*, *Antimony* *Diaphoretick*, \mathcal{A} . ζ ss. with Balsam of Peru. q. s. make a Mass. Dose \mathcal{N} j. once or twice a Week, as you see occasion.

VIII. *Kαρδιαλγία*, Cardialgia, dolor Ventriculi, Pain of the Stomach.

§ 1. The Cure hereof is to be
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considered in respect either of the Symptom it self, Or of the Cause. § 2. In respect of the Symptom, you may anoint the stomach with the Oyls or Quintessences of Rosemary, Oranges, Limons, Sage, Rue, Spike, or Amber; and then apply thereto Camomil or Wormwood, made very hot in a frying pan: Inwardly you may give *Liquor Viæ Andryus*; the saphrine Oyl of Camomil; Or a Bolus made of *Elect. Diaphenicon* ℥iij. *Philonium Amanum* ℥ij. Or *Laudanum* gr. iiii. given in Decoction of Camomil: after which give things which strengthen the stomach; as Syrup of Corals and Pearls, powder of Coral, Spirit of Mint, &c. Galen saith, that a Copping-glass applyed to the Stomach does presently take away pain; but you must be sure that no crude humor or very little lodges there, for then the pain will be increased. § 3 In respect of the Causes; If it proceeds of Wind, it is to be cured by things discussing flatulency and expelling the Fl. gm from whence it comes: First, give an Emollient Clyster; and presently after one that is Carminative, in which dissolve *Benedicta Laxativa*, Oyls of Dill and Rue, and Honey of Rosemary: if the pain yet continue, you must make a Clyster with equal parts of Hippocrass and Oyl of Rue, with *Aqua Vitæ* ℥ij. Or make a Clyster with Sack, to which add of the Powers or Quintessence of Juniper Berries ℥j. or Quintessence of Cloves ℥j. or infuse thereof gut. viij. of the Oyl of Cinnamon, but if by reason of the vehement pain, Cly-

sters can neither be given nor retained, you must make an Emollient and discussive Bath, in which let the sick be half an hour, or an hour, as they are able to endure it, and whilst in the Bath, exhibit a proper purge. § 4. Secondly, foment the stomach with Sack, in which there is put a quarter part of the Powers or Quintessence of Rosemary, Oranges, Limons, Origanum, Sage, Rue, or of our *Quinta essentia virtutum*: after fomentation anoint the Stomach with those Powers, or the Quintessence of Cloves, Mace, Nutmegs or Sage; Or with the Oyl of Mace or Nutmegs, by expression: after anointing apply *Emplastrum de Baccis Lauri*; Or a Cataplasm of Honey and Cummin Seed, or Cummin with Balsam of Sulphur. § 5. Thirdly, While these things are a doing you ought to give a gentle Vomit (if there be a loathing) or a purge against Flegm. For this purpose some commend the *Gilla Paracelsi*, which is no mean thing; others *Vinum Benedictum*, or *Aqua Benedicta Rulandi*. If you purge, let it be made of Agarick, for in this case it is an admirable thing. § 6. Fourthly, after purging give new drawn Oyl of Bitter Almonds, mixed with Sack; Or Hippocrass mixt with Cinnamon water: Or this, R Spirit of Angelica ℥iij. Oyl of Cinnamon ℥ss. mix, and give almost half a spoonful of it mixt with two spoonfuls of Sack. This following is a specifick: R Juices of Agrimony, Wormwood, Centory the less, A. iiii. clarify and sweeten with Sugar, let it be taken three mornings fasting. Another

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Specifick is the distilled water of Camomil Flowers: Dose $\mathfrak{z}\text{ij}$. warm. In defect thereof Forrestus commends a Decoction of Camomil Flowers, which makes the pain vanish as by an enchantment. But we commend upon our own experience the Queen of Hungaries Water as inferior to none, especially if it be mixed with $\mathfrak{z}\text{ij}$. of the former mixture of spirit of Angelica. § 7. Fifthly, If the pain yet threatens danger, you must apply to the stomach Bread hot out of the Oven, and as hot as it can be endured, sprinkling with Spices, and dipt in Vinegar, and then forthwith give Narcotics, which if prudently given do wonders, as the Bolus of Hælideus, at § 2. above. § 8. Sixthly, when the pain is gon, let the sick (if subject to this Disease) purge 2 or 3 times a month to take away wind; and use things to strengthen the stomach, as the former mixture of Sp. Angelicæ, Spirit and Tincture of Mint, the Queen of Hungaries Water, Tincture of Cinnamon, Black Pepper, Corals, Antimony, &c. § 9. If it be from external causes, as things swallowed down, a Vomit is necessary, and if it be Poyson, you must use Salt of Tartar and things Alexipharmick. § 10. If it be caused from Choller, the Cure differs but little from that of Wind, only you must quallify the sharpness of the humor, by the levigated pouders of Pearl and Coral, by cooling Juleps, and by emulsions of the greater cold Seeds. new Milk, new drawn Oyl of Sweet Almonds, yolks of Eggs, &c. and giving also in the mean while O-

piates. § 11. If it proceeds from Distemper of the stomach, or from Tumors or Ulcers thereof, you must take it away, by curing those Distempers as we teach in their proper places.

IX. $\kappa\alpha\delta\iota\sigma\tau\alpha\varsigma\ \pi\alpha\lambda\mu\iota\varsigma$ Palpitatio Cordis, Beating of the Heart.

§ 1. The Cure respects either the Paroxism, or the Causes.

§ 2. In the Paroxism you must use those things which assuage the Symptoms, by recreating the heart and strengthening of it: and also discuss the vapors arising from Melancholy, or other corrupted humors. Inwardly give our Confectio Alkermes, or old Venice Treacle: Or, the Species Diambra which are admirable: but our Quintessentia Virtutum: Or, the mixture of Spirit of Angelica and Oyl of Cinnamon, are inferior to no other things: Or you may give Confectio Alkermes in strong Cinnamon Water. To these add Aqua ex cordibus Animalium Heurnij, Succus Cardiacæ, or juyce of Motherwort, juyces of Borage, Bugloss, and Bawm. The said Aqua ex Cordibus is thus made. R A Sheeps or Goats Heart, slit it and wash it clean, after wash it with Rose water, then cut it in slices, put it into a glazed Vessel with beaten Cloves, but without any Liquor: cover the pot and Lute it strongly, and put it into a hot Oven, till the juyce comes forth. Some make it by adding Cinnamon and Cloves, A. $\mathfrak{z}\text{ij}$. Canary, Borrage, Scabious and Rose Water, A. $\mathfrak{z}\text{ij}$. Confectio Alkermes $\mathfrak{z}\text{ij}$. Valeriola commends it as an admirable thing, and Zacutus Lusitanus affirms it to be excellent in weak

weakness of the Vital faculty, and resolution of the Blood and Spirits. Outwardly anoint the Stomach with *Q. Essentia Virtutum*. § 3. In respect of the Causes, if it proceeds from a Vapor or Wind, Oyl of Citrons with Conserve of wood Sorrel is of good use: so also the true Rhapontick *ad Hij.* given in Wine; Or *Confectio Alkermes* vulgar, and of Our præscription; Or Treacle water of *Crollius* with Camphir: if the vapour is Malign or poysonous, prepared Pearl or Coral given in Borrage or Cinnamon water is good: Or the said Pearls and Coral dissolved in Lavender water, by the inspection of Oyl of Sulphur or Vitriol; Or Cinnamon water, with the Powers or Quintessence of Juniper Berries, with an Alexipharmick Epithem to the Heart. § 4. If it proceeds from an Humor, it is removed by Venice Treacle, *Confectio Alkermes*, *Species Diambre*; Outwardly, apply Bread hot out of the Oven, and well moistned with our *Q. Essentia Virtutum* to the Heart. § 5. If it proceeds from Worms, known by a Convulsion; you must often exhibit the Bezoar Stone.

X, Συνοπή, Syncope, Leipopŷchia, Ecclufis, Swooning, Fainting Weakness.

§ 1. These differ only in Degree, and therefore admit of one kind of Cure, which has respect either to the Paroxysm, or to the Intermiffion. § 2. In the Paroxysm, you must refresh and chear the Spirits with Vinegar of Clove - Gillyflowers, of Rue, and of Elder, Balsam of white Amber; and by putting to the

Nostrils Rose water, Cinnamon Water, *Balsamum Apoplecticum Horstij*: if the Disease is hot you must use cooling Medicines, but if cold, then such things as are of heat and warm; and to Women-kind such things as are of the most stinking Savor. To the region of the Heart, apply an Epithem of Treacle, Mithridate and oyl of Citrons. Lay the sick upon their back, throw cold water in their Face, provoke sneezing, put *Aqua Vita, Imperialis* or *Cælestis* into their mouth, hold hot bread to the Nose, stop the Nostrills, wring the Fingers, and use manifold Frictions and Ligature. § 3. In the intermiffion, you are to have respect unto the Causes: if it be from dissipation of spirits by transpiration, through too great a rarity or thinness of the skin, give sweet things, and meats of a good juyce and thickning; anoint the skin with Oyl of Myrtle, and Oyl of of Mastick, and let the sick be in a cold place: if this dissipation be for want of food, extream hunger, violent exercise, &c. give him strong wine, and toasted bread dipt in it; nourishing Broths, restaurative waters, Gellies or Caudles made of yolks of Eggs, Wine, Cinnamon and Sugar. § 4. If it be from Corruption of the spirits through any malignity, give Antidotes, Alexipharmicks, and such things as resist Malign and Pestilential Feavers, The Powers or Quintessence of Angelica, Cinnamon and Bawm, *Electuarium de Ovo*, Mithridate, Venice Treacle, or Our New London Treacle. § 5. If

§ 5. If it be from Poyson, first give a Vomit, then Venice Treacle, Mistridate, or other Antidotes: if there be a burning or gnawing in the Guts, give cooling Cordial Potions impregnated with Salt of Tartar, because that is an Enemy to ail Poysons, in its own Essence. § 6. If it be from too great a loss of Blood, immoderate evacuations, or too violent purging, you must refresh the Animal Spirits, with perfumes and sweet scents, choice meats, good Wine, sleep and rest: and in case of too much purging, give New Treacle or Old with Laudanum gr. ij. dissolved in Wine, and often anoint the Belly all over with Oyls of Myrtles, Quinces and Wormwood, Ana, mix together with a little Rose Vinegar, and give a Clyster of steeled Milk, with three yolks of Eggs, and Philonum Romanum ℥ij. Bleeding, whether by the Mouth, Nose, Womb or Fundament is to be stopped, as is taught in its proper place. § 7. If it comes from too much sweating, you must sprinkle the Face and Hands with cold Rose water, or Plantane water, or with vinegar of Roses; you must make the Air artificially cool, and apply cooling Epithems to the Heart; and withal give cooling Julebs made of Plantane and Rose water, with Syrups of Sorrel, Violets, Apples, Limons, Quinces, Myrtles, Coral and Lapis brunellæ, or rather sharpened with a few drops of Oyl of Sulphur or Vitriol, which essentially cools the whole mass of Blood: then close the pores, by anointing with Oyls of Myrtles, Mastich

and Quinces. § 8. If it come from suffocation of the Spirits, you must use Frictions, Ligatures, and Cupping, and then apply things discutive. § 9. Lastly, In respect of the general Cure of these Maladies, you must be sure to strengthen and fortify the Heart and vital spirits, by Confectio Alkermes, de Hyacintho, species Diamoræ, and the mixture of Spirit of Angelica and Oyl of Cinnamon: if there be any thing which does offend, you must take it away by a gentle Vomit, and then comfort the stomach with this, R Quintessence or powers of Cinnamon ℥iss. of Nutmegs ℥vi. of Cloves ℥ij. of Oranges, Limons, and Citrons. A. ℥j. mix and sweeten with white Sugar ℥j. Oyl of Sulphur, enough to make it sharp. Lastly strengthen and restore the whole man by strong Broths, made of Cocks, Hens, Partridge, Pheasants, and other land-Fowl, let him eat the Flesh of Larks, Sparrows, and other like Birds: give him often the juyce of Legs of Mutton, and strong Gellies made of Veal and Ox Flesh, the Aqua ex Cordibus, and the Caudle of Eggs, Wine, Cinnamon and Sugar.

XI. Πίνα, πίνα, Pica, Citra, Malacia, a depraved Appetite.

§ 1. In women with Child there is little to be done, by reason of the unfitness of the Subject, and danger of Miscarriage: but you may give gentle things, and such as we prescribe in want of Appetite, things cleansing and strengthening the stomach, as salt of Wormwood, Syrups of Quinces, Corral and Citrons, with other things

things of like nature. § 2. If it happens to Virgins by reason of the Green sickness, you must cure it by curing that Disease, as we have taught Cap. 32. Sect. 1. following.

§ 3. If it happens to Men, through Obstructions of the Liver and Spleen, you must cure it by removing those Obstructions: but if it be from an essential Distemper of the Stomach, you must first vomit with *Vinum Benedictum*, *Vinum Antimonij*, *Sal Vitrioli*, &c. Then Purge well with Catharticks, of the nature of the humor abounding, (which is generally Flegm) and in Women, if the Terms are stopt, you must provoke them: afterwards you must strengthen the stomach with *Elixir Proprietatis*, *Pilulæ Angelicæ*, prepared Coral, Powers of Citrons, Limons, Oranges, Cloves, Nutmegs, &c. Venice Treacle, *Laudanum gr. j.* Syrups of Citrons, Limons, Corals, Quinces, Mint; Q. Essence of Mint, Oyls of Vitriol and Sulphur, *Confectio Alkermes*; Oyls of Cinnamon and the mixture thereof with Spirit of Angelica and Canary.

XII. *Equet* ♂, *Equetæ*, Vomito, Vomines, Vomiting: Nautica, Nausea, Loathing.

§ 1. As these Diseases differ only in degrees, so the Institution of their cure may be one and the same, and therefore if they come by consent from some other part, you must cure the Diseases of that part, without which all your Medicines will be applyed in vain: But if it be a Critical Vomiting, it ought not to be stayed, for by it nature discharges the Morbifick matter. § 2. In order to the Cure of a Symptomatick Vomiting

proceeding from Viscous humors, you must first throw out these humors by an Emetick Medicament; which if they be tough and clammy, they ought to be prepared with Oxymel simple or Scyllitick, then give warm Oyl, Gilla Theophrasti or white Vitriol prepared, but *Sal Vitrioli* calcined to redness is better: here Antimonials (which draw strongly from remote parts) are to be avoided, yet some Authors have advised to *Vinum benedictum*. § 3. To those that cannot bear Vomits, you must often give Clysters; and gentle purges with Rhubarb therein, as *Diacatholicon ℥iij.* with Rhubarb ℥j. Or *Hiera picra* with Rhubarb ℥j. Or, *R. Pilulæ Cochæ minoris ℥iiss.* *Laudanum gr. iij.* mix them, it will stay the Vomiting, and about 5 hours after they will work downwards: Barbet prescribes this in a thick Flegm: Take Resin of Agarick, Tartar Vitriolated A. gr. iij. Catholick extract gr. xij. Oyl of Rosemary gut. ij. mix and make Pills. Or, Take Sugar ℥ij. *Sal Absynthij* ℥j. Troches Alhandal ℥ss. Tartar Vitriolated gr. vj. mix for a powder: but before you give these you ought to prepare the humor with this: *R. sweet spirit of Salt ℥ss.* let the Sick take gut. x. in his drink as often as he drinks: Or, let him take this: *R. Sal Armoniack ℥j.* of Carduus ℥ss. of Tartar Vitriolate gr. v. mix for a powder. If there is heat and sharpness of humors purge with this: *R. Syrup of Cichory with Rhubarb*, Syrup of R. ses. with Sena, juce of Dandelion, A. ℥j. Cremor Tartari ℥j. Borrage water enough to make a Juic. § 4. After

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cleansing the Stomach by Vomits, Clysters or purges, you must come to strengthening of the Stomach with some of these things following. First by Acids and Astringents, as roots of Galanga, of sweet garden flag, China, Zedoary, Ginger, of Succory: Leaves of Wormwood, Calamint, Dill, Baytree, Marjoram, Bawm, Mint, Sage, Savory, Sorrel, Purslane, Dandelion: Flowers of Roses, Betony, Pomegranates: Seeds of Dill, Anise, Fennel, Cummin, Lovage, Cardamoms, Coriander, Citrons; the greater and lesser cold seeds Pepper, Nutmegs, Cloves, Cinnamon, Orange, Limon and Citron peels: the Woods of Guajacum, of Sassafras, of Aloes, of yellow Sanders: Wines of all sorts, Spirits and Vinegars made of them, Verjuice, stale Beer: Aqua Anabalsina, Imperialis, Cœlestis, of Anniseeds, Aqua vitæ Matthioli: Elixir of Citrons, Proprietatis Paracelsi, Vitrioli Mynsichti: Syrup, Water and Oyl of Cinnamon; Syrups of Mint, of Corals, of Pearls of Myrtles: Confectio Alkermes, de Hyacyntho, Old Treacle, Myrrh, Mastich, also its Oyl and Spirit: Rob of Barberries and Gooseberries, Pulp, Juice and Syrup of Quinces: Juice, Water and Oyl of Mint (this last is a most admirable thing, which cures as it were all Diseases of the Stomach) distilled Oyl of Marjoram Powers or Essence of Rosemary, Limons, Oranges, Citrons, Mint, Amber, Roses, Cloves, Nutmegs, Cinnamon, Angelica: Diascordium: Salts of Wormwood, of Tartar Vitriolated: Aromaticum Rosatum, Di-

ambra, Diatrion Pipereon, Diarrhodon; Pilulæ Alephanginae, de Mastiche, Assajereth, Cochiae: § 5. Among singular and special prescripts we have these. Take Mint water ℥ij. Syrup of Mint, of Myrtles, A. ℥ij. Tincture of Cinnamon ℥ij. Conf. de Hyacyntho ℥j. Laudanum gr. ij. mix them. Or this which stops Vomiting presently, R. Conserve of Mint ℥j. Treacle ℥ij. Cinnamon powdered ℥ss. Peruvian Balsam gut. iij. mix for a Bolus. Or this Julep, if it be a Cholerick Vomiting, R. Sorel Water ℔j. juce of sour Pomgranates, white Sugar, A. ℔ss. clarified juce of Mints ℥iii. mix and clarify, in the mean while, boyl in a rag, yellow Sanders, red Roses, A. ℥ii. Dose ℥iiij. Or this, R. Pease, make of them a thin Broth, which sharpen with Vinegar or Oyl of Sulphur. Or this, R. Cinnamon, Cloves, Mastich, A. ℥ss. green Galls, Cypress Nuts, roots of Snake-weed, and Tormentil, Pomgranate rinds and flowers, A. ℥ij. Sumach, Myrtle Berries, red Roses, A. ℥j. leaves of Mint, Centory, dried Wormwood, A. Mss. boyl all in water and red wine, A. q. s. in which dissolve a little musk (for sweet things stay vomiting much) of this give morning, noon and night ℥ij. and foment the stomach with the same. § 6. These following are said to be specifics. A few grains of Mastich, taken first in a morning, and last at night: Or Balsam of Peru, gr. iij. mixt with Sugar; or taken in a rare Egg. Or Salt of Wormwood ℥j. mixt with juce of Limons ℥j. it is admirable in malignant Feavers. Or Oyl of Sulphur and Vitriol mixt with Spring

Spring water to make it sharp; it is a powerful thing: if the vomiting be very violent, make it the sharper, or give the Oyl in Canary. Or give crude juyce of Quinces 2 or 3 spoonfuls at a time, it doth wonders. Or give Vinegar and Juyce of Mint, of each a spoonful at a time, it is a singular thing. Or if you have not Juyce of Mint, give 2 spoonfuls of the strongest Vinegar. Or let the sick smell often to Camphir, and take a few grains of it in a little Rose water, mixt with a little *Diamoschum*. § 7. If none of these things do, you must at last have recourse to Narcoticks; as, *R. Aromaticum rosatum* ℥j. *Laudanum Paracelsi* gr ij. or iij. mix and make a powder: Or *R. Wormwood water* ℥ij. *Juyce of Mint* ℥ij. *Laudanum* gr. iij. dissolve and sharpen with Oyl of Sulphur, or Vitriol: and if the stomach be cold, you may give an hour or two after a spoonful or two of *Aqua Imperialis*, or of the mixture of *Sp. Angelica*, or Oyl of Cinnamon. Or you may give *Laudanum* gr. ii. or iij. alone: Or our *Confectio Anodynæ*, Or the *Requies Nicolai*; Or *Philonum Persicum Romanum*. Or *Mizistrale*: with other things of like nature. § 8. The last thing which we must do, is the Application of Topicks, of which in Authors we have great variety. A Fomentation made of Wormwood and Mint in Smiths water: Or of Snake root, Mint leaves, Plantane, Purslane, Bramble and willow: Or *R. Wormwood, Mint, Bawm*, A. Mij. Vinegar, wine, A. q. s. boyl and make a Fomentation for the Stomach. An Ointment. *R. Hypocistis*, grains of

Sumach and Myrle, A. ℥ij. *Mastic*, grains of *Kermes*, A. ℥j. Oyl of *Myrles* ℥ij. wax, q. s. make an Ointment. An Oyl: *R. Distilled Oyl of Mint* ℥ls. Oyl of *Citraways* ℥i. Oyl of Nuts by expression ℥ii. mix them: with which anoint the Stomach twice a day. A Cataplasim: *R. Marmalade*, or pulp of Quinces made in Vinegar, ℥ij. powder of *Mastic*, grains of *Kermes*, *Myrle berries*, *Sumach*, A. ℥ii. with juyces of *Mint*, *Quinces*, or of *Wormwood*, make a Cataplasim. Or steep a crust of Bread in Rose Vinegar and apply it, strewing it first with powder of Cloves and Nutmegs: Or a Toast dipped in strong wine and juyce of Mint, strewed over with the said powder. Or the Cataplasim of *Villanovanus* made of sharp Leven steeped in strong Vinegar and Juyce of Mint, which is a powerful thing: Or boyl a sponge in strong Vinegar, and apply it hot to the Stomach. An Emplaster; *R. powder of Cloves*, *Nutmegs*, *Mastic*, A. ℥i. Oyl of *Nutmegs* by expression ℥iiij. distilled Oyl of *Mace* and of *Citrons*, A. gut. xv. gum *Caranna*, q. s. make a Plaster. Or, *R. powder of Mint*, *Cinnamon*, *Nutmegs*, A. ℥j. *Mastic*, *Cloves*, *Mace*, A. ℥ij. sharp Leven ℥vi. Vinegar q. s. make an Emplaster: Or, *R. Mastic plaster* ℥ij. make it soft like a Cerat with Oyl of *Myrles* and *Quinces*, A. q. s. § 9. If the inward Tunicle of the stomach is excoriated, or inflamed, or if there be a Hiccough: *R. Mucilage of Fleabane* and of Quince seeds, Gum *Tragacanth*, dissolved in Rose Water, A. ℥vi. *Camphir* ℥i. Syrup of *Violets* and of *Roses* solutive, A. ℥j. mix

mix for a Lohoch. Or *R̄* Rose and Plantane Water, A. ʒij. Juycce of Houfseek, Syrup of Purslane, A. ʒj. Yulks of Eggs N^o j. Laudanum gr. ii. mix and give by it Spoonfuls : the Oyls of Nuts, Mastich, Quinces and Myrtles, are here of good use.

XIII. *Ἀνορεξία*, Inappetentia, Want of Appetite.

§ 1. In the Cure of this Disease, you are to consider whether it be Essential, or by consent from other parts : if it be from default of the Stomach ; it is to be reduced to either a hot or cold distemper with Matter. § 2. If it comes from a hot Distemper, first alter with cooling Julebs and Broths, made of Tamarinds, Myrobalans, juyces of Roses, of Succory, Rhubarb, &c. Sallets of Lettice, Purslane, and other cooling things are good : So also the Oyls of Salt, Sulphur, and Vitriol. Secondly, purge with some proper cooling purge ; after which give Syrup, Marmalade, or juyce of Quinces to strengthen the Stomach, or the Syrup mixt with Syrup of Wormwood, Conserve of Sorrel is excellent : so is Coral and Pearl prepared. Thirdly, Outwardly anoint the Stomach with Oyl of Roses, Myrtles and Quinces, Ana, mixt together with a little Wax, putting in a little Rose Vinegar when you use it : Or lay on a Rose-cake or Sponge soakt in Rose Vinegar, removing it continually before it grows hot : and if the Disease continues, let the Sick Bath twice a Week for fourteen or twenty days together with a Sulphur Bath. § 3. If it comes from a cold Distemper of

the Stomach, wherein Melancholick or pituitous humors are gathered together into the Stomach, or draw them from all other parts of the Stomach : herein you must first rectify the Distemper of the parts from whence these humors are drawn ; then make a proper evacuation of the matter contained in the Stomach. If the Sick Loaths, and is easy to Vomit give Oxymel of Squills, Sal Vitrioli, or Aqua Benedicta Rulandi. § 4. But if the humors are thick, and fastned upon the Tunicles of the Stomach, and the Sick is not used to Vomit, you must evacuate downwards, Prepare the Body with Vinum purgans of Horstius or of Mynsich, Decoctum E-pithymi, Senæ, Aperitivum majus or minus or (if there be heat of the Liver) with Infusum seri Latius secundum : then give Pills of Hiera Simplex, or Alepharginae : if the Sick cannot swallow Pills, give the Infusion of Hiera Mesua mixed with Hony of Roses and Oxymel. § 5. The Stomach being sufficiently cleansed, you must now come to the strengthening of it, which you may effectually do, with Tincture of Wormwood, Wormwood Wine, and Syrup of Wormwood : Or with the Water, Juycce, Syrup, Spirit, Oyl, or Quintessence of Mint : Or with Salt of Wormwood given in Wine or Broth : Or with the candied Peels of Oranges, Limons, and Citrons, and Syrups of Coralls, Quinces and of Citrons : Or with Tinctures of Coral, or of Antimony : Or with Cinnamon water, or Oyl of Cinnamon and Spirit of Angelica :

Or

Or with *Aqua Imperialis* or *Celestis* : Or with Spirit of Mastich thus made, *Rx Mastich* ℥ij. *Galangal* ʒj. *S.V.* lbs. digest and distil : Or with the *Elixir Proprietatis Paracelsi* & *Maxij* : Or the juyce of Centory, the less, or mixt with equal parts of juyces of Wormwood and Agrimony : Or with hot Wine commended by *Costaus* : Or with the constant use of *Zedoary* which *Hartman* commends to the skies as a thing which never fails : Or this which *Zechnus* commends as the most powerful : *Rx washed Turpentine* ʒij. *Powder of Mastich* ʒss. *Aromaticum Rosatum* ʒss. make a Bolus to be taken two hours before Meat : Or the *Sal Sacerdotale*, and Salts of Centory, Ceterach and Scurvy grass : Or Balsam of Peru given a gut. ij ad iv or vi in Wine an hour before meat : Or Candied Citron peels, Myrobalans, and Nutmegs : But if all these things fail we commend to you the Powers or Quintessences of Citrons, Oranges, Limons, Carraways, Cinnamon, Nutmegs, and Juniper-Berries : this following I have used with such success that it has never failed : *Rx Powers or Quintessence of Juniper-Berries* ℥iv. *Ess Veneris* ʒss. mix and dissolve as much as may be, till the Tincture is out of the Salt : Dose one Spoonful in a little Sack. § 6. Outwardly for Topicks, anoint the Stomach with Oyl of Nutmegs mixt with Balsam of Peru : Or with Oyls of Wormwood and Mastich, mixt with the said Balsam : Or with Oyl of Cloves and Rosemary mixt with Oyl of

Wormwood ; and gr. viij of both Musk and Ambergrise. Or with *Balsamum Stomachicum Regium* *Balsamum Angelicæ Sennerti* : Or the *Balsamum Stomachicum* (in our Pharm. lib. 4. cap. 4. sect. 24.) And lastly, apply *Ceratum Stomachicum Galeni*, or that of *Crato* : but *Galen* advises them not to be kept long upon the part, because at length they will dissolve the heat thereof : when the Plaster is removed apply the skin of a Vulture drest, or of a Hare, or of a Cat, to the same.

XIV. Fames Canina, The dog-like Appetite.

§ 1. In the Cure hereof we are first to respect the Hunger it self, which is allayed or cured with the yolks of Eggs hardened in Water or Wine : *Hippocrates*, sect. 2. Aph. 21. saith, That Wine plentifully taken asswages hunger : so also *S.V.* and *Aqua Vita*. All fat things and Oyl are good in this Case : *Villanovans* saith, That one thus Diseased did eat a hot Loaf dipt in Oyl : and a Woman drank the melted Suet of an Ox, with as much warm Oyl, which she did twice : and both these did so disdain Meat, that they eat nothing in five days, and so were Cured : *Narcotick Medicines* are of good use in this case, because they dull the too exquisite Sence of the Stomach ; and for this purpose some commend New Treacle. § 2. The next thing to be considered is the Cause : if it be by reason of Worms feeding on the Chyle, you must exhibit *Hiera Picra*, or *Powder*, or Tincture of *Colocynthis*. § 3. If it be from the too great

want of Nourishment, proceeding from a sharp humour which dissolves it, you may give this. *R. Diascordium* ʒss. *Antimoni* Diaphoretick, Crabs Eyes, red Coral prepared, Cinnamon, A. ʒj. Oyl of Mint, gut. viij. Syrup of Wormwood, q. s. make an Electuary, to be given three times a day: in the mean season give continually Canary, Malligo, or Tent mixt with Quintessence of Nutmegs, when you give it, add Spirit of Sal Armoniack, gut. viij. Sack only with the Yolk of an Egg, Cinnamon, and Sugar is an excellent thing in this Case. § 4. If it proceeds from cold acid Flegm or Melancholy, wrinkling the Orifice of the Stomach, compressing and pulling of it, Authors advise to purge with *Hiera Picra*; and *Riverius* to evacuate by Vomit or Stool, with such things prescribed for want of Appetite from a cold Distemper, for (saith he) although these Diseases are contrary, yet they come from the same humors: but *Sylvius de le Boe*, in *Prax. lib. 1. cap. 2. sect. 26.* prescribes no purging Medicine, because he knew none, which will gently bring forth sharp humors, and of this opinion is the learned *Decker*. Remedies to heat the Stomach and strengthen it both Internally and Externally are here good, and such are those at *Sect. XIII. § 5 and 6.* foregoing: as also such things as cause thirst, for by much drinking hunger is diminished. § 5. These things following are said to be. *Spicificks*. Old Venice Treacle, Diascordium, with Cinnamon water, Sage-wine, Essence of Bawm, Tincture of Cinnamon, Q Essence of Mace

Nutmegs, Juniper-berries, &c. and *Riv. vius* in *Prax. lib. 9. cap. 2.* saith, That Ambergrite taken to gr. v. or vj. in an Egg re-boyled, strengthens the Stomach, & by a special quality cures this Disease.

XV. Bullimus, A great Persudical Appetite.

§ 1. The Cure of this differs little from the former: save this has respect either to the fit, or Intermision. § 2. In the time of the fit, when swooning happens, you must use frictions, reviving Spirits and Quintessences, smelts of Vinegar of Wine, &c. and indeed all those things which we have prescribed in the Cure of a Syncope. § 3. In the Intermision or time out of the fit, you must give meats of good juyce, bread &c. in Wine, &c. and this Medicine following. *R. red Coral prepared, Antimony Diaphoretick, Cinnamon, A. ʒj. white Sugar* ʒij. make it into a fine Powder for viij. Doses: afterwards give nothing but Canary, Mallago, or Tent, with the yolk of an Egg, Cinnamon and Sugar.

XVI. Poluidipsia, sitis Morbosa, Excessive Thirst.

§ 1. The Cure has respect first to the vehement Symptom: then to the Cause. § 2. The Symptom is mitigated by Crystal or Coral held in the Mouth: cold water corrected with a little Vinegar: juyce of Live Crabs, with waters of Violets and Houfleeke, sprinkled with a little Lapis Prunellæ: a Lohoch Compounded of the Mucilages of Fleawort and Quince seeds, A. ʒss. Sugar - Candy powdered, white Starch, Tragacanth, A. ʒj. made up with Syrup of Violets q. s. Spring-

Y y

wa-

water is also very good boyled with Sugar Candy, and the juyce of a Citron. Some commend a Sage-Poffet : and excellent in this case also is a Limon Poffet.

§ 3. If it be from a defect of moisture, it is to be cured by meat rather than by drink ; all things which cause Vomiting or Loosness are to be shunned, because such Actions exhaust the moisture : you must order a restoring Diet as in the Cure of a Consumption, He-ctick, and Marasmus. Galen approves two remedies, viz. Milk, and a Bath. The use of

Milk we shew in the Cure of a Consumption. The Bath may be made of a Decoction of the Heads, Feet, and Guts of Sheep, with Roots of Althæa, and of Lillies and Mallow and Violet Leaves. Coming out of the Bath anoint the Loyns, Back, and Stomach with the Oyl of Violets or Marrow of Veal, Spring water with Oyl of Sulphur is good here. § 4. If it be from a dissipation of the moisture of the Stomach through heat, you must cool and moisten with an Emulsion of the four greater cold seeds : and here Juyces of Hou-sleek and Purslane, Syrups of Lettice and Poppy, with Narcotics have place. § 5. If it be from a Fever, it is taken away by curing of the Fever ; as we in the proper place have taught : here you must delude the thirst, by holding cooling things in the Mouth : Conserve of Wood-Sorrel, is good, so also Sal Prunellæ. Oyls of Sulphur, Vitriol and Salt mixt with Beer, Ale, Wine or Broth, &c.

XVII. Concoction hurt, Crudity of the Stomach.

§ 1. The Cure in general is by taking away the Causes external, antecedent and conjunct, which causes, increase, or continue the Disease. If it be caused from humors coming from other parts into the Stomach, they must be evacuated and revelled, the Disease of the part amended, and cured, as we in their proper places teach : and lastly, the Stomach to be strengthened, as we have taught in the Section of want of Appetite : if it be from the evil state of the Liver, you must correct it, and then comfort the Spirits with some acid Substance as Oyls of Vitriol, Salt, Sulphur, juyce of Limons, Oranges, Citrons, Pomgranates, &c. § 2. Apepsy, or the Concoction quite abolished, is cured by the former Directions : the Arcanum of Tartar is commended if gr. x. or xij of it be taken every day in Broth.

§ 3. Bradupepsy, or weak concoction, is to be cured as a cold Distemper of the Stomach : for this, inwardly to be taken is the Tincture of Amber commended ; Tinctures of Coral and Antimony, red Coral prepared, Pilule Anglicæ Grulingi, Elixir Proprietatis Paracelsi, & Maxij, Hiera Picra, or the Infusion thereof in Wine, Diacorum, condited fruit of Egplantine ; Extracts of Calamus Aromaticus, of Juniper berries, and of Zedoary, Spirit and Quintessence of Wormwood, Elixir Vitrioli Mynsichti : Syrup of Juniper berries, Conserve of Roses Vitriolate : the Dupli-cate secret of Mynsicht : or Salt

Niter prepared and melted with Sal Gem, A. ʒij. Sales of Wormwood, of Carduus, and of Tamarisk, A. ʒj. of Galingal, Cubebs, Mace, A. ʒij. mixed together. Fæcula of Cuckow point: Spirits, Oyls, and Quintessence of Oranges, Nutmegs, Cinnamon, Maltich, but above all the Powers or Quintessence of Juniper-berries ʒiv. mixt with Ens Veneris ʒss. Outwardly, you may foment the Stomach with the same, and over it apply a Plaster of Labdanum, Tacamahac. Balsam of Peru, and Oyl of Mint. § 4. Dyspepsy, Corruption of Meat, or Surfeiting; it is cured by cleansing the Stomach with Sal Vitrioli, Aqua Benedicta Rulandi, or other things of like nature; then you must strengthen it, with proper things according as it is either hot or cold: if it be hot you may give juyce or Essence of Sorrel; but Quercetans Syrup of Corals has the first place.

XVIII. Singultus, the Hicough.

§ 1. We are to consider the Cure in respect either to the Paroxysm or to the Causes. § 2. In respect to the Paroxysm, it is restrained by Narcoticks, as R̄ Philonum Romanum ʒj. Saffron, Cinnamon, A. gr. vj. Laudanum gr. j. Oyl of Sage q. s. mix them. Laudanum it self is an approved thing; so our Confectio Anodyna, and Liqueur Vita Anodynus: and indeed Sylvius de le Boe, commends Opiats as the best things. § 3. In respect to the Causes, if it be from Salt or Sharp, or tough humors sticking to the Coats of the Stomach, Vinegar of Squils ought to

be taken often, or instead thereof Oxymel-Scylliticum, to cut and dissolve the matter, then evacuate with Vinum Beneactum, or Sal Vitriols after give Hiera picra made into Pills with Oxymel: Elixir Proprietatis and Extract of Castor; then Terra sigillata, fine Bole, or red Coral prepared.

§ 4. If it be from Wind, you must use the same things, adding to them Carminatives: Cupping-Glasses applied to the Stomach, are said miraculously to do good. The former Compositum of the Potestates Junipers & Ens Veneris is admirable: so also a nodulus made of Dill and Poppy seeds, Or Oyl of Cumin-seed; Or by the Imposition of Oak ashes, sprinkled with Canary, after applying a Plaster of Bay-berries. § 5. If it comes from a hot, Cholerick, and Sharp humor, give a Vomit or gentle Purge: Duretus saith, That many, when they have been almost dead with the Hicough, have been cured by purging five days together with Hiera picra, after which they avoided black glutinous humors: and here the Pilula Angelica Grulingij are very profitable: Emulsions of the cold seeds are of excellent use, and assuage the sharpness of the humor; so also Almond Milk: Or Syrup of Apples mixt with Syrup of Quinces: Or Barly broth, or Ptisan, often to be taken: Or Oyl of sweet Almonds: let the Stomach be fomented with a sponge dip't in Rose Vinegar; a noint the Region of the Liver with Unguentum Populeum or Oyl of Poppies, or Oyntment of juyce of Houseleek, and apply upon the

Stomach Ceratum Santalinum.

§ 6. If you fear any malign, or pestilential venom, you must give our Teale or that of *Andromachus*, or *Mithridate*, and anoint the Stomach, with the Oyl of *Scorpions* of *Mathiolus*.

§ 7. If a Fever be present, you ought to take away the matter in the beginning of the Fever, by gentle Evacuation: in the state, you need not fear, because there will be a Crisis by Vomiting: if it be frequent, so that the Sick seems in danger of Choaking, you must give a stupifactive.

§ 8. If it be from External Causes, as first, of cold Air, Drink, &c. you must anoint the Back and Stomach with hot Oyls, giving inwardly Potestates Rosmarini: if from sharp Food, or Medicines, you must give Pustian, Oyl of Almonds, an Emulsion of the cold seeds: if from Corrupt food, or food corrupted in the Stomach, you must Vomit with *Sal Vitrioli*, or *Vinum Antimonij*, or purge with *Aloes rosata*, agarick, &c. if from Poyson taken in, you must give things which resist Poyson.

§ 9. These following things are specifics let it proceed from what cause sever. First, an Infusion of *Crocus Metallorum*, if the Case is desperate. Secondly, Decoction of *Guajacum*, and Baths of *Sulphur*, if the Disease is stubborn: Thirdly, purges made of *Aloes* and *Agarick*. Fourthly, the Powder of Aniseeds, which doth specifically cure. Fifthly, Clysters with Tincture of *Collocynthis* and *Vinum Benedictum*. Sixthly, sneezing Powders, which shake off the matter compacted on the

Tunicles of the Stomach. *Servably*, *Aloes* ʒj mixt with *Landanum* gr. iij. or this of *Asclepiades*. R̄ *Costus* or *Galingal*, *Saffron*, *Spicknard*, *Roses*, *Mastic* A. ʒiv. *Asarabacca*, *Aloes*, A. ʒij. *Opium* ʒj. with juice of *Fleabane* make Troches: Dose ʒj. every Morning. § 10. Observations. *Platerius* cured a Boy ten years old, who was troubled Night and Day; with water of green Walnuts, distilled with Radishes digested in Vinegar. *Forestus* saith, He cured one with a Decoction of Seeds of Dill, Caraways, Purslane and White Poppies, made in Ale. We cured two men and one woman (when the hope of Life was past as it were) only by the Exhibition of *Landanum Paracelsi* in choise Canary. We cured a Youth with Our *Confectio Anodynæ*, Vomiting him first with *Sal Vitrioli*.

XIX. Distemper of the Lungs.

§ 1. It is either without matter, or with matter: that without matter has no danger at all in it, and may be easily cured, which is generally done with alteratives, opposite to the predominant Intemperature. § 2. If it be with matter, it is to be evacuated and drawn back: and if there is more slegm then ordinary, it is to be removed with things which expectorate and mollify, as roots of *Eringo*, Marsh Mallows, *Raisons*; then give things which cut as *Oxymel simple*, and *Scyllitick*, Syrups of *Vinegar*, *Citræns* and *Lemons*: mucilage of *Linseed* is good here: if there be a Fever you must abstain from all sorts of Lohochs, least by their dry-

nels

ness and clamyness they hinder expectoration. § 3. If it be with a matter hot; you must use Medicines moderately cooling (after a gentle evacuation) the principal of which are White, and Black Poppies, corn Poppies, Violets, Endive, Succory, Barly, Water-Lillys, and their Syrups, and order a cooling Diet with Barly-water sweetned with Syrup of Violets.

§ 4. If with a matter cold, first incise, open, and expectorate; then give things heating, chiefly Saffron, which is the very Life and Soul of the Lungs, Extract of Calamus Aromaticus old Treacle, Juyce, Syrup and Decoction of Coltsfoot, Tobacco, Scabious, Roots of Flower de luce, of Aron prepared; Elixir Proprietatis of Maxims, Mixtura simplex, Oxyssellick, Tinctura flegmagoga Grullingij, Our Elixir Vitæ, &c. § 5. If it be from a matter moist you must notwithstanding carefully avoid such things are too drying and astringent: Oyls of Sulphur Viatriol and Salt may here be used: Flores sulphuris given in a rere Egg. Wine in which Sassafras and China have been infused; Decoctum sudorificum Empirici Germani: Coral and Pearl prepared, &c. are here of singular use. § 6. If it be from a matter dry, you must give Raisons, of the Sun, Breast Milk, Asses Milk, Cows Milk, distilled water of Tortoises, Broth of Veal, Conserve of Violets, Almonds; Milk, Emulsion of the cold seeds; &c. and Externally order the Sick a Bath of Sweet water.

An Appendix concerning the Obstructions of the Lungs.

§ 7. If the Obstruction is from Blood it is to be driven back and evacuated; if it becomes clotted; you must give Sal Virrioli in Broth; or Oxyssellick and Posset drink; or Water and Vinegar ʒvj. that it may be pleasant to Drink; and not provoke to Coughing, which may be administered Blood warm three or four times a day. § 8. If it be from a pituitous humor, you may prepare the Body with juyces of Coltsfoot and Horehound, with other attenuating and cutting Medicines; purge well with Agarick, which some esteem a specifick in this Case; then expectorate with juyce of Borrage, Spanish juyce of Liquorices, whole Tincture may be take in Canary, and sharpened with Spirit of Sal Armoniack, which is one of the most especial things in the Cure of this Disease. § 9. And the same thing is to be done if Pus or purulent matter be extracted from any Apostem there or in any of the parts adjacent. § 10. If it be caused from Exsiccation, which is very frequent and incident to such as work in Metals and Mines; you must humect and supple the body with Emollients: Oyl of sweet Almonds is good, so also Almond Milk, and Emulsion of the cold Seeds. § 11. If there be an Apostem or Apastem, which commonly follow an Inflammation or Peripneumonia, you must with all possible speed bring a suppuration, then make it suddenly break, after

cleanse, and lastly heal, all which things we have hinted in Sect. IV. and V. foregoing.

XX. Wounds of the Lungs.

§ 1. If the Wound be not wide enough for the Blood to come forth, but that it subsists and abides in the Cavity, you must widen the Orifice thereof with a Penknife, or Incision Knife. § 2. To stop the Bleeding, these things following are commended; leaves of Strawberry, Betony, Scabious, Ladies Mantle, Sanicle, Comfrey, fine Bole, Frankincense, &c. § 3. Give inwardly Tent with some Drops of spirit of Sal Armoniac, or Volatile salt of the same, often, for this opens all stoppages, helps the Circulation of the spirits; and dissolves all coagulated matters and Blood, if any be. The rest of the Cure see in Cap. 25. Sect. 55. § 2, 3, 4, 5, and 6. Of this Book.

XXI. *Œdema*, Phthisis, The Plethysick, Ulcer of the Lungs, or Consumption of the Lungs.

§ 1. The Indications of the Cure are sevenfold: first the Cause producing and nourishing the Ulcer of the Lungs is to be taken away, by Revulsion, Repelling, Derivation and gentle Purgation, by Vomit or Stool; secondly, the vehement Symptoms are to be alleviated: Thirdly, the Fever is to be opposed by Antifebricks: Fourthly, the Ulcer is to be cleansed with gentle abstersives: Fifthly, the Ulcer is to be healed by Consolidatives and Glutinatives: Sixthly, Stomaticks, and things comforting the Heart and chearing the Spirits are continually to be administered: seventhly, a Restorative Diet is to be institu-

ted. § 2. For Revulsion, you may apply a seton to the nape of the Neck, by which Fabritius Hildanus saith, He cured many: the Hair also of the Head ought to be shaved off; and indeed all those things ought to be done which we have taught in the Cure of a Catarrh: otherwise whatever is done will be in Vain. § 3. For repelling, you must now and then, and by turns, (with good intermissions) give Narcoticks, for they drive back powerfully; syrupus Hemoptoicus in Aqua Papaveris is of singular use; so also Syrupus of Lettice, Purslane, Macodium, and the Emulsions of the cold seeds: Laudanum Paracelsi is inferiour to none. § 4. For Derivation, you must use gentle purges at times, (especially if the Body be not very low) made of Manna, Cassia, Syrup of Roses, Rhubarb, Syrup of Succory with Rhubarb, chiefly Tinctura solutiva, which may be given to the most delicate and tender Bodies from $\mathfrak{z}\mathfrak{j}$ ad $\mathfrak{z}\mathfrak{i}\mathfrak{j}$ or more; but all Medicines made of Aloes you must forbear, for they are hurtful; you may give Manna $\mathfrak{z}\mathfrak{i}\mathfrak{j}$ at a time in Chicken Broth; Or Cassia $\mathfrak{z}\mathfrak{j}$ with powder of Liquorice $\mathfrak{z}\mathfrak{l}\mathfrak{s}$. moreover you ought to make derivation by sternutatories, Erhines, Masticatories and Expectorators as we have taught cap. 29. sect. 24. § 5. foregoing; if the matter offends the Stomach, and there be want of Appetite, you must give a Vomit of Sal Vatrioli, or Oxymel sylitric. § 5. The vehement symptoms are chiefly a violent Cough, an Asthma, and sometimes an extream pain in the

the Breast and sides, together with
looseness. Here you must give
Openers, Expectorators, and O-
perates alternately: First Syrup
of Colts-foot, Syrup of Limons,
of Corals, and the like, not made
too sharp, but qualified with A-
qua Vitæ Mariboli have place:
then Rob Veronice and Juniperi-
num, juyce of Liquorice simple
and compound, and the Com-
pound of Our prescription;
Marmelada Pectoralis, Lohoch de
Caulibus and scylliticum Mesue
opus Pectoralis nost. After these
you may adhibit Lohoch de portu-
laca, ex Allijs, Rosatum Mynsich-
ti, Diacodion Crocatum Mynsich-
ti, Diacodium solidum, Tinctura
papaveris erratici Mynsichti, In-
fusio Pectoralis Compositus, &c.
By the alternate use of these
things the Symptoms though ne-
ver to extremum will be alleviated,
made gentle, and as it were ta-
ken away to all appearance:
but if the Breath be very short
or difficult to be drawn, you
must in all your Openers and
Expectorators mix Spirit of Sal
Armoniac, for it loosens, re-
solves, and dissolves all Coagu-
lums, and frees the passage from
all things which stop them: Out
of the Enumerated the Artist
may chuse those things which
he either likes best, or can easi-
est come by. § 6. The third In-
dication requires us to oppose the
Feaver by proper Antifebricks;
where also, such things as correct
the Distemper of the Blood are to be
given: the Antifebricks must
be such things as cool and moi-
sten, such are the juyces of Bor-
rage, Bugloss, Succory, Bawm,

Dandelyon, Cremor Tartari, Sal
Tartari. Or this; R Confectio
Alkermes, Crabs Eyes prepar'd,
A. ʒj. Species Diarragacanthi fra-
gidi pulvis Haly, A. ʒss. Salt of self
beal ʒj. Tartar Vitriolate ʒss. su-
gar of Pearls ʒss. Syrup of Althea
ʒij. mix and make a Lohoch to
be taken at all times in the day:
Or this, R Syrup of Althea Ferneli
ʒij. Diacodium ʒj. Bezoar Mi-
neral, Salt of self beal, Crabs Eyes
prepared, A. ʒj. mix for a Lo-
hoch: The Tincture of Corals
and of Antimony are powerful
here, being taken in old Mallagoy
or Tent; and indeed all those
things which we propose in the
Cure of a Hectick which in its
place you may find. And al-
though by those things which re-
sist the Feaver the Blood is cor-
rected, tempered and qualified,
yet some have a specifick
force in this Case: Milk is
famous for this purpose, which
may be taken at dinner time, (if
there be no pain of the Head, or
the Feaver be not great) that it
may not sour in the Stomach, or
cause unsavory Belchings: at
Supper give an Emulsion of
White Poppy-seed, and of the great-
er cold seeds, A. ʒj. Almond Milk
ʒij. also Milk boyled with Rice;
or instead of Milk, with Cock-
broth, you may make Barly
Cream. § 7. The fourth Indica-
tion requires the cleansing of the
Ulcer, for which you must give
things which cleanse and expecto-
rate, such are, juyces of Ground
Ivy of Hypericon, of Hedge
Hysop, of Garden Hysop, of
Watercresses, of Marsh Mallows,
of Moule Ear, of Yarrow, &c.

Pimpernel, of Wallwort, old Sugar of Roses, Whey of Goats-Milk, Honey, Honey of Roses: Or this: R. *Althæa* roots, *Tamarinds*, *Sena*, A. ʒj. juyce of Mallows ʒij. Orrice, *Rhubarb*, *Crabs-Eyes* (bruised and ryed in a bag.) A. ʒss. *Sebestens* N^o. viij. *Columbine* and *Roman Nettle seed*, A. ʒj. boyl in Barly water; strain and to ʒxxv. put *Syrupus Diacnicu*, or of *Carthamus* or *Bustard Saffron* ʒij. *Lapis Prunelle* ʒj. mix and make an Apozem, of which give ʒv at a time, Morning, Noon and Night. *Decoctum aperitivum majus & minus*, are of excellent use, so *Hydromel simple*, and Compound, thus made, R. new *Hydromel Simple* ℥xxiv. juyces of *Coltsfoot*, *Fennel*, *ground Ivy*, *Veronica*, *Hypericon*, *Mouſe ear*, *Maiden hair*, *Scabious*, A. ℥j. (all clarified) mix them and add, *Spanish juyce of Liquorice* ʒij. *Elecampane roots sliced* ʒij. *Coriander seed*, *Fennel* and *Anniſe seed*, A. ʒj. boyl half an hour, clarify, then strain, and with Yest work it up, to be drunk of, about a quart a day. *Barley broth* boyled with *River Crabs*, or *Cray-fiſh*, cleanse powerfully: so also the sweet Spirit of Salt, and *Oleum Tartari per deliquium* taken by drops in Broth, Ale, or Wine, are very efficacious. § 8. The fifth Indication requires the consolidation and healing of the Ulcer. For which purpose is commended the *Flores Sulphuris* with a rere Egg, *Candied Citron Peels*, roots of *China*, *Sassa*, *Polypody*, *Elecampane*, *Comfry*, *Orrice*; leaves of *Maiden Hair*,

Ground Ivy, *Hyſop*, *Hearts-eale*, *Yarrow*, *Mouſe-ear*, *Burnet*, *Dandelyon*, *Plantane*, *Self-heal*, *Lungwort*, *Sanicle*, *Scabious*, *Hypericon*, *Flowers of Violets*, *Oranges*, *Roses*, *Hypericon*, *Seeds of Althea*, *Mallows*, *Poppy*, cold Seeds greater and lesser: *Pistick Nuts*, *Citrions*, *Sanders*: *Sweet Oyl of Salt*, *Oyls of Sulphur* and *Vitriol simple* and dulcified with S.V. *Anilated Balsam of Sulphur*, *Elix. Proprietatis* with *Oyl of Sulphur*, *Syrup of Poppies*, *Diacodium Syrup of Comfry* of *Fernelius*, *Lohoch of Fox* and *Wolfs Lungs*, *Pulver Haly*, *Species Diatragacanthi frigidi*, *Crabs-Eyes*, *Chocolate*, *Antimonium Diaphoreticum*, *Lac Sulphuris*, *Bezoar Mineral*, *Tincture of the Balsam of Sulphur* drawn with rectified S.V. *Syrup of the juyce of Tobacco* (by which alone *Heruinus* saith, That several Consumptive men have been restored :) *Decoction of the headed Coleworts*, with *Sugar of Roses* dissolved in it. But concerning the *Flowers* and *Milk of Sulphur* as also the *Balsam*, this we have to advise, that they be not always given in great Quantity, nor by themselves but with moistening Medicines, as *Decoction of China* with *Raisons* and *Liquorice*; for some Phycians do testify that very many have fallen into a *Phthisis* by the use of those things. *Decoction of Guajacum* is affirmed by several as *Erastus*, *Præceptorius*, *Arcæus*, to have cured many, but it ought to be given with a sparing hand, and corrected with San-

Sanders, Raisons, Red Coleworts, and Laudanum: so will it stop the Catarrh, and allay the sharpness of humors. To the same purpose Syrup of Comfrey is good; so also Decoct. of Bugle in Mutton Broth, the Extract of E-nula; and the Balsam of Peru, which heals all Ulcers of the Lungs gut. j. ij. or iij. being made into Pills with Sugar and taken every day: To these you may add the Conserve and Sugar of Roses, which are preferred by some before all other things; more especially if you take it with sweet Spirit of Salt. *Reverius* commends the Powder of Burnet taken ad ʒj in broth every day; as also this following Syrup. *Be juyces of Ground Ioy, Veronica, Carduus, A. ʒviij. juyces. of Maiden Hair common and Golden, of Scabious, of Lettice, A. ʒij juyce of Spanish Liquorice dissolved ʒj. White Sugar lbjls. boyl to a Syrup, strain, and mix therewith Rob of Juniper-berries lbj. Dose two spoonfuls.* The juyce pressed out of baked Turneps, and taken either alone, or with Conserve or Honey of Roses is an admirable thing; so also the Syrup and Tincture of Coral: and in general most of the Medicines proposed to heal the Spitting of Blood. § 9. *The sixth Indication requires Stomackicks, and such things as comfort the Heart and chear the Spirits: such are Syrup and Gelly of Quinces, sweet Oyl of Salt, the Spirit, and Oyls of Sulphur and Vitriol, Syrup of Limons and Citrons: blood red Tincture of Black Pepper (which is of transcendent Vertue,)*

Tincture of Antimony and of Corals, Oyl of Cinnamon, or the mixture thereof with Spirit of Angelica, *Electuarium ad Tabidos, Confectio Alkermes* Vulgar, and of our prescription, Oyl of Mint, or the mixture thereof with Spirit of Mint, the Powers or Quintessence of Mint: to these add all other things which provoke the sensual Appetite. § 10. *The seventh and last Indication requires a constant restorative Diet. Let his food be meat of good juyce and easy of Digestion, strong broth, of Flesh both of Beasts and Fowl, as also Gellys are of great force and nourish much, such as we have spoken in Sect. VII. aforegoing: Cock-broth has been admirably successful, the skin and fat being first taken away, so also the Gelly made of Hogs Feet, and the Shoulders of the same, you may make it Savory with Salt, Pepper, the juyce of a Limon, Sugar, &c. Comfrey roots boyled in Broth have a great effect: Syrup of Comfrey is powerful, for it cleanses, heals, and strengthens, more especially if it be given with Pulvis Haly ʒij at a time every Morning: if he drinks Ale, let it be sharpened with Oyls of Sulphur or Vitriol, for they dry the Ulcer much: Gelly of Snails in Milk has been greatly approved and spoken of; but no Food has more prevailed than the flesh of Vipers boyled and eaten, or given in Powder, and for the same purpose Gelly of Vipers is every day to be used: to these add Barley Cream, Almond Milk, Walnuts, Pine-nuts, Rice, &c. let his Drink be Barley water*

ter boyled with Liquorice, and sweetned with Sugar or Hydromel, or Decoction of China, or rather Milk; Breast Milk is best, after that Asses, then Mares, then Goats, and lastly, Cows Milk, of which the Sick may begin with little, and increase it daily, till he drinks it immeasurably; Milk answers all the intentions of curing as *Platerius* saith; it may be taken alone, or sweetned with Sugar of Roses to keep it from coagulating in an acid Stomach: by its wheyish part it cleanses, by its Unctuous part it heals, and by its caseous part it strengthens and restores the whole man; but it does not much good unless it be taken long, and in large quantities: but in a strong Fever and great pains of the head you must disuse it, or mix it with Water. § 11. If there be a great colliquation by frequent and much sweating, the Sick is in great danger and seldom recovers; this is often caused by unskilful giving of *Opiates* and *Narcoticks*; but if there be any hope, you must divert it by Diureticks and frequent gentle purges; and by constantly giving inwardly Oyls of Sulphur or Vitriol, in all liquid things (Milk excepted) that the Sick takes; for this insensibly cools the whole Mass of Blood, and stops the too great fluxibility of the humors: give also Conserve of red Roses, and anoint the Breast and Back Bone with Oyls of Roses *Omphacine* and of Violets.

XXII. Vices of Breathing.

§ 1. *Macropnæa*, or a great re-

spiration distending the Breast, is cured by taking away the Fever which causes it. § 2. *Tachypnæa*, a too great and swift respiration is cured by removing of the distempers of the Heart, Breast and Lungs: if it proceeds from the heart, the Q. essence of Cinnamon, or of Nutmegs is commended: if from the Breast and Lungs you must give Spirit of Sal Armoniack in a proper Vehicle, for that gives immediate relief. § 3. *Dupnæa*, Difficulty of Breathing is a kind of Asthma, and so to be cured as in that Disease we have taught. § 4. *Apnæa*, the taking away of all sensible respiration with danger of suffocation; it must be cured according to the cause from whence it proceeds: if it be from Hysterick Fits, give the Sick cold water first; then water mixt with the Powers or Q. essence of Sea Cole or of Amber: if from a Syncope, fling cold water in the face largely and hastily, then give the mixture of Cinnamon and Spirit of Angelica: if from eating of Mushrooms, exhibit a Clyster sharp and drawing: give Spirit of Sal Armoniack in fair water, and bind all the extream parts with strong Ligatures.

XXIII. Tumors of the Dugs.

§ 1. If it be an Inflammation, you must first use a thin and spare Diet, which is cooling and moistening. § 2. Make Diversion by such things as provoke the Terms, if they be stop't. § 3. Make an evacuation by a gentle purgation. § 4. Apply repellens, but let them be gentle, least the Heart should be overmuch cooled: in the augmentation

tation a fomentation of Butter and Ale is good: the extreame hardness help with Marrow of a Calves Thigh \mathfrak{z} ij. mixt with Oesfipus \mathfrak{z} j. Saffron \mathfrak{z} iv. Cumin powdered \mathfrak{z} ij. If it suppurates it ought to be opened in divers places, because the Breasts contain in them many cavities. § 5. If the pain is great apply (if in Summer, leaves of Henbane; but if in Winter then the root of Henbane roasted in Embers, and beaten into a Cataplasim with Hogs Lard. § 6. If it be an Oedema, it is to be cured as we have taught in the cure of that tumor; but this observe, First, That if the Courses be stoppt, they be speedily provoked: Secondly, that you use the stronger sort of suppuratives because the matter is very tenacious and loth to yield. Thirdly, that you have a regard to the Stomach, and evacuate Flegm. § 7. If it be from a ventosity, which comes either from the suppression of the Seed, or some excrement; you must first endeavour to make evacuation of the matter retained and offending. Secondly, you must wet a Linnen cloth in Soap suds, being dried, apply it, to cause a dissipation. Thirdly, To mitigate the pain anoint with Oyl of Amber. or apply Bread hot out of the Oven, moistned with Oleum Nardinum and Oyl of Rue. § 8. If it be from the great quantity of the Milk; it is sometimes cured in one day with Ung. de Althæa compositum; the Watery part being suckt out by a Woman or a Whelp: if this evacuation is neglected, the Breast every day grows harder and harder, and

then you must apply this Cataplasim. \mathcal{R} Meal of Althæa, Fænugreek, A. \mathfrak{z} j. Crumbs of brown bread \mathfrak{z} j ls. Flowers of Elder, Camomil, red Roses, A. M. j. boyl in Ale, then add Rose Vinegar \mathfrak{z} j. and make a Cataplasim. § 9. The pain being eased, and the flux of humors stoppt, discuss with this: \mathcal{R} Meals of Beans, Linseed, Fænugreek seed, A. \mathfrak{z} j. Cummin seed \mathfrak{z} ls. boyl in Wine; then add Ung. de Althæa compositum, Oyl of Camomil, A. \mathfrak{z} j. make a Cataplasim. § 10. If it apostematizes ripen it with this; \mathcal{R} leaves of Althæa, Mallows, A. M. j. Meal of Linseed, Fænugreek seed, A. \mathfrak{z} j ls. Leven \mathfrak{z} ls. boyl in Milk, then add Ung. Basilicon \mathfrak{z} j. Saffron \mathfrak{z} j. make a Cataplasim § 11. The Tumor being suppurated open with a Caustick or rather with a Lancet: then put a Tent into it dipt in Balsam of Sulphur to the end of the Cure, laying over all Emplastrum diasulphuris Rulandi.

XXIV. Scirrhus of the Dugs.

§ 1. If it be by Congestion, or heaping up of a humor, you must avoid Vinegar, lest it hardens it like a Stone, or otherwise wasts the part, and consumes it by overdrying; nor must you use manual Operation, if the whole Dug grows hard, and adheres to the Thorax or Chest. § 2. If it be by resolution wherein the thinner matter is dried up by ill Medicaments; Galen did in this case perform it by the vapours of the sharpest Vinegar, cast upon the Stone Pyrites or fire Stone red hot, after the use of liquid and moistening things. § 3. In the curing of all sorts of exquisite Scirrhus's be sure to have a special regard to the Spleen,

Spleen, Terms stopt, and that Emollients and Resolvers succeed one another, and be alternately applied. § 4. If it be not an exquisite Scirrhus, you may use repellers without astringtion, among which is commended the Oyntment of Frogs: for further directions in the Cure of a Scirrhus of the Duggs, see cap. 24. sect. 14. of this Book.

XXV. Cancer of the Duggs.

§ 1. The Cure of this Disease may be known by what we have already delivered concerning a Cancer in general, in cap. 24. sect. 15 of this Book; yet these things are to be observed; First, That if the Cancer is not exulcerated, it may be made much more easy by provoking of the courses if they be stopt, and bringing them to their natural state and condition, either by Art, or by Medicines. § 2. Secondly, you may apply the Frogspawn of Crolius, or the Oyntment which is compounded of Litharge ʒij. incorporated with Rose water and Oyl of Roses, A. ʒiij. in a Leaden Mortar with a Leaden Pestle. § 3. Thirdly, let there be reiterated purgations with extract of Hellebor, Pills of Lapis Lazuli prepared with juices of Fumitory, Hops, and fragrant Apples. § 4. Fourthly, If it be exulcerated it may be performed and perfectly cured (according to Hartman) with Aqua Fuliginis, which has in it a cleansing faculty, and with the Oyl of fixed Arsenick well tempered with Plantane water. § 5. Or otherwise, you may make Incision to the Quick, and app'y Hartmans blessed powder: Or else burn by actu-

al and potential Cauteries, more especially if the profounder and greater Vessels be taken up therewith.

XXVI. Distemper of the Stomach.

§ 1. It is either without or with matter: that without matter is either hot, cold, moist or dry. § 2. A hot distemper is cured with cooling things, lightly and not too long applied; and by a cooling Diet, where Barly water, Barly cream, and an emulsion of the 4 greater cold seeds take place. § 3. A cold Distemper is cured by heating Stomaticks, inwardly and outwardly moist, and by a heating Diet, where Spirit, Oyl and Quessence of Mint and Wormwood Wine has the chiefest place. § 4. A moist Distemper is cured with dryers without any great heat or cold, such are Ashes of Hens Guts, of Swallows; burnt Harts horn, red Coral, burnt or decapitated Salt, Galingal, Troches of Vipers. § 5. A dry distemper is cured by moistening Stomatick Medicaments; and by a humid Diet, where Milk has the chiefest place beginning with a small quantity at first, and every day increasing the Dose: to which add new laid Eggs, Almonds, Pine nuts, Raisons, Figs, &c. § 6. A Distemper of the Stomach with matter is also as manifold as the former and is cured First by the Alteration and Evacuation of the humor abounding: Second'y, by strengthening the part with proper Specificks. § 7. If it be from matter generated in the Stomach, you must evacuate it by Aloetick Me-

Medicines, *Hiera picra*, and *Mecchoacan*; then give things to strengthen the Stomach. § 8. If it be from matter falling into the Stomach from other parts, you must have respect to the parts which send the matter. § 9. If it be from a matter sticking in the Cavity of the Stomach, it is cured by Vomiting first with Oyl, then with warm water. lastly with *Sal Vitrioli*. § 10. If it be from a *Chollerick* matter, it is cured, first by a cooling Diet, wherein Chicken broth made with Lettice, Endive, &c. is very good. Secondly, by evacuating of the matter by Vomits made of the down, july, or flowers of Walnuts dried in Sinoak, poudred and given ad ʒj. in Honey and Water; and with purges made of *Hiera, picra*, *Aloes*, &c. Thirdly, by such Medicines as alter and cool, as juyces of Succory, Endive, Dandelyon, Violet water; Syrups of Pomgranates, of Coral, of Quinces of Strawberries, Currans, Tincture of Roses, Lettice, Succory, &c. condited. § 11. If it be from a *Flegmatick* matter, you must empty first by Vomits, incisers and attenuaters being preparatively given, such are *Diatrion pipereon*, *Diacalamintli*, Essence of Bawm, Pennyroyal, Oxymel simplex: then vomit with *Sal Vitrioli* in Broth, Oxymel of Squills with Decoction of Radishes, Decoction of Hellebor, &c. Secondly, by purges, among which the *Tinctura Phlegmaggæ*, *Grulling*, poulder of Jallap and infusion of *Mecchoacan* are chief. Thirdly, strengthen the Stomach with

extract of *Culamus Aromaticus*, Powers or Q. essences of Orange Limon and Citron peels, sweet Spirit of Salt, Vitriol or Sulphur, Elixir proprietatis, Oyl, Spirit or Q. essence of Mint, Bawm and Angelica. § 12. Outwardly anoint the Stomach with distilled Oyls of Wormwood, Angelica, Rue, Nutmegs, Mint, Pennyroyal, Mastich, Cummin, mixed with equal parts of Infused Oyl of Camomil or Roses, and then applying over the Stomach a Cerat made of the aforesaid Destilled Oyls with pure Labdanum and Wax.

XXVII. Tumors of the Stomach.

§ 1. An Inflammation of the Stomach is cured as other Inflammations in general: but in an Inflammation of this part this is particularly to be observed; first, That emptying by Vomit or Stool is not convenient, because they trouble the humors and draw them to the part affected; yet Avicenna commends a Decoction of Tamarinds or Cassia ʒss. dissolved in Whey or Endive water, given every day to the seventh day, because they purge not by Attraction, but by mollifying: after the seventh day (signs of Concoction appearing) purge with Rhubarb ʒj. and red Sanders ʒj infused in Borrage water, adding to the straining, Syrup of Roses ʒij. § 2. Secondly, in the mean season you must give every day emollient, cooling and sensitive Clysters. R Chicken broth, or Decoction of Mallows and Violets, A. lbj. Cassia new drawn ʒj. Oyls of Roses and Violets A ʒij Sugar ʒjss. ʒ lks of Eggs No. ij. make a Clyster. Or

Or you may give a Clyster of warm Milk twice or thrice a day, it is a mean thing, but of singular use. § 3. Thirdly, you must give altering Medicines by the Mouth, such as we advise against pain of the Stomach from a Chollerick humor: Juices and Syrups of Purslane, Lettice, Succory, Sorrel: Emulsions of the greater cold Seeds, white Poppy seed, Syrup of Poppies; let their Drink be Barly water with Syrup of Violets, and sharpened with Oyl of Sulphur, to be taken cold: afterwards you may mix with them things which dissolve such are Volatile Salt and Spirit of Sal Armoniack, of Harts horn, and of Amber, Turpentine washed with Wormwood water, &c. § 4. Fourthly, if the former things will do nothing, and the pain is exquisite, you must come to the Use of Narcoticks which ought to be given with Prudence and Care: for this purpose we commend Laudanum nostr. or the Liqueur Vitæ Anodynus given in Sack. § 5. Fifthly, outwardly use repercussives, among which Saccharum Saturni with Plantane or Nigbshade water, with juice of Wormwood or Mint is commended; but Cataplasms you must avoid in the beginning, because by their weight they offend, retain the heat, and increase the Inflammation: afterwards you may anoint with Oyls of Wormwood, Nutmegs, and such like: If these things resolve it not, it will degenerate into an Aposteme.

*An Appendix concerning an
Aposteme of the Stomach.*

§ 6. If Apostemation cannot be prevented, you must then hasten Suppuration by fomenting with Decoction of Chamomil and red Roses, and then applying a Suppurative Cataplasim, which you may make with Pouder of Chamomil and Althæa roots, Hens grease, juice of Scabious and Honey, with Crums of Bread: this Cataplasim or some other like is often to be renewed till the Aposteme is broken. § 7. Inwardly also you must cherish the heat, and give such things as may gently provoke Vomit, for by this means the Tumor is broken of a sudden, for this purpose two things are excellent, a strong Carduus Posset and Salt of Vitriol: when the Apostem is broken, you must cleanse and heal it by the next Section.

Of a Windy Tumor of the Stomach.

§ 8. If it be from Windy nourishment, you must cure it with good Diet and Discussives, as Balsam of Fennel, Oyls and Powers of Carraways, Juniper-berries, Dill-seed, &c. inwardly taken, and outwardly applied: and by applying outwardly Decoction of Ebulus, or hot bread out of the Oven moistened with Oyl of Rue. § 9. If it be from a Flgmatick matter causing Wind, you must first give preparatives, then evacuate it with Oxymel Scyllitick, or with Sal Vitrioli or Vinum Benedi-
nedictum

medicūm: after which ashes of the Bones of Sows feet prepared with Rue water may be exhibited in Wine. Some say, a great Cupping Glass applyed without Scarrification, but with much fire does discuss excellently.

XXVIII. Ulcers of the Stomach.

§ 1. An Ulcer of the Stomach arising from what cause soever is cured, first, by cleansing of the Ulcer, and evacuation of the matter peccant only with Lenitives: for which purpose Hydromel may be given alone, or mixt with Manna of Frankincense, as Galen advises; Or with Barly water with Sugar of Roses in the beginning: avoiding all manner of Vomits, lest they dilacerate the Ulcer more. § 2. But if the Ulcer is old, you must use Barley broth, Decoctions of cooling herbs; Almond Milk, Sugar of Roses; Or new Milk with Sugar and a little Honey; afterwards Chalybeat Milk and Iron-water for ordinary drink; Or water wherein fine Bole or Terra Sigillata has been infused which is excellent, adding a little austere Wine, if the

heat of the part be weak. § 3. Give often some good Vulnerary Decoction, as Traumaticum Vulnerarium, Cancrī, &c. Or this, R̄ juices of Agrimony, Scabious, Burnet, Bugle, Sanicle, A. ʒiij: clarify: and sweeten with Syrup of dried Roses ʒiij. give it for 5 Doses often to be repeated. Decoction of China in Chicken broth given for 20 or 30 days together is very good, so also the Spiritus Vulnerarius Vitrioli, or Mineral waters of Vitriol, Iron or Alum. § 4. During the whole Cure keep the Stomach clean with gentle purges of Rhubarb, Tamarinds, Myrobalans, Syrup of Roses and Diacatholicon taken once a Week. § 5. Lastly, to heal up the Ulcer give Pulvis Haly: Or this, R̄ Pul. Haly ʒij. fine Bole, Terra Sigillata, red Coral, Blood stone all prepared, Sanguis Draconis, A. ʒiij. Hypocistis Sircocol, A. ʒj. make a powder, which give with Sugar of Roses in Poppy water: Or, you may give it with Conserve or Blood of Comfrey roots: Or, with Syrup of Quinces or Myrtles: Or, make Troches thereof with Mucilage of Fleabane seeds.

CHAP. XXXI.

Of Diseases of the lower Ventricle.

I. **X**OLICA, Cholicus dolor, The Cholick.

§ 1. In the Cure hereof, we shall first consider the Paroxysm; then

the Preservation; after the Cause:

§ 2. The Paroxysm is to be removed by exhibiting first Emollient Clysters, afterwards such as are Car-

Carminative and Discussing, in which you will do well to add *Aqua Benedicta Rulandi* ℥iv : Or *Colocynthis* ℥ij or iij boyled in a Carminative and emollient Decoction. If the pain be too Vehement you must give *Liquor Vita Anodynus*, Or *Laudanum* gr. ij or iij dissolved in Sack ; afterwards you may give this, R Oyl of sweet Almonds ℥ij. Manna ℥jss. dissolve and mix with fat Hen broth : Tincture of Pepper, Or Quintessences of Caraways and Juniper berries, &c. are very excellent here : so also the Guts of a Wolf washed in Wine, dried in an Oven in an earthen Pot, and poudred, ℥j thereof given in white Wine presently cures : Or the stones of a Horse : Or *Tragea Antinephritica Quercetani* given ad ℥j in white Wine. § 3. As for preservation from this Disease, Crato advises, first to exhibit a Clyster of Decoct. of Speed-will in Hen-broth ℥ij adding *Mallago Wine* ℥ss. *Mirrh* ℥ss. Secondly, outwardly anoint with *Balsamum Sacrum*, or Oyl of Myrrh. Thirdly, give three hours after Supper Zedoary scraped ℥j. Fourthly, twice or thrice a Week in the Morning fasting give Venice Treacle ℥j. or ℥ss in a Glass of Canary. § 4. In respect to the causes, if it comes from an Inflammation of the Guts, or from Worms, or the Stone, you must cure it, by raking away those Diseases, as we in their proper places have shewed. § 5. If it comes from thick viscus and stagnant humors, you must exhibit Clysters as at § I. above ; but such strong Clysters, if they be often repeated,

would do more harm than good ; moreover you may use such fortifications, Baths, Ointments and Emplasters as we prescribe in the Cure of *Dolor Ventriculi* coming of the same cause : then give by the Mouth Oyl of sweet or bitter Almonds ad ℥vj. for that eases the pain, and casts the matter cleaving to the Guts downwards : Or this, R Oyl of Almonds (or Oyl Olive for poor people) ℥iv. Canary ℥ij. Syrup of Poppies ℥j. mix them for a Potion. Oyl of sweet Almonds mixed with Manna in fat Broth eases the pain, and evacuates the matter offending : but you must abstain from Agarick for fear of Vomiting, which in this Case is unsafe. § 6. Tois done you must exhibit Carminatives and Discussives, among which Oyl of Zedoary often given à gr. iij ad ℥j is good : so also Oyl of Aniseeds or of Fennel seeds, of Carraways, of Cloves, of Juniper-berries : or which is better their Powers or Quintessences, given in Canary : the Oyls, Powers, or Quintessences of Limons, Oranges, and Citrons are famous for this purpose : some much commend the juyces of white Horehound and speedwell. § 7. Outwardly anoint with Oyl of Camomil mixed with Chymical Oyls of Annis, Caraways Amber, or Juniper-berries : Or with the *Galbanetum Paracelsi* (which see in Our Pharm. lib. I. cap. 8. sect. 30.) you may also apply to the Belly. Gum Caranna, *Taccamahacca*, Or a Cataplastm made of Turpentine ℥ij. laid on with Stuphs and sprinkled over with Pepper finely poudred ℥ss.

Or a Cataplasm of green Camomil bruised, and heat very hot in a trying pan, and applyed. § 8. If all these things do nothing, you must purge with the Tincture of Colocynthis, Spiritus Vitæ aurens Rulandi, or Essence of the Troches of Alhandal extracted with distilled Mallago Sack. § 9. You must apply Cupping Glasses, which as Galen saith, Discuss the pain as it were by an Enchantment. § 10. Then you may give an Opiate mixt with Catharticks, as R. Aloes ʒj. Scammony gr. vii. Laudanum gr. jv. mix and make Pills: they take away the pain after one hour, and then purge out the noxious humor. Or you may give Diaphenicon and Philonium Romanum: but this we have found successful, when all things have failed. R. Quintessence of Juniper berries ʒi. Ess. Veneris ʒj. Laudanum gr. iv. dissolve for two Doses: and if the Disease continues long, you must use a Decoction of Guajacum for many days, with lenitive purges and often iterating of Clysters. § 11. The pain being alleviated, you must perfectly carry off the Cause by purging with the things beforenamed, or with the Tinctura Phlegmagga Grulingij. § 12. Lastly, to strengthen the Stomach and Bowels give the mixture of Oyl of Cinnamon ʒss. with spirit of Angelica ʒiv. Or mixtura simplex, called Spiritus ex tribus; Or which is admirable, the sweet or dulcified spirit of Salt. § 13. If the Cholick proceeds from Sharp and cholerick humours, you must exhibit emollient Clysters, with such things as rem-

per the sharpness of the humors: and the Sick ought to Bath himself in an emollient Bath, after which a Cataplasm may be applyed to the bottom of the Belly made of Elder leaves bruised and boyled in Oyl of Camomil: Galbanetum Paracelsi is also very good to anoint with. § 14. The humor is to be evacuated with Extract of Rhubarb, or Hierapicra, mixt with cooling things: Or with Mercurius dulcis, given alone, or with Diacretum, drinking after it Infusion of Senna with Rhubarb; after which, if the pain continues, you may give Mallago Wine with Oyl of Sweet Almonds, and then exhibit a Clyster of warm Milk with Honey of herb Mercury. § 15. If the pain be yet vehement, you must come to the use of Narcoticks; you may give Laudanum alone, and sometimes mixt with purges in a large quantity, because opiates hinder their working: Juleps also made of Syrups of Poppies, Lettice, Purllane, and Violets with Endive and Sorel water and juyce of Limons are good: so also Vitriolated waters: and if the Sick be very thirsty give him cold water to drink, as Galen Meth. lib. 12. cap. 7. advises: Septalius used it with good success: and Amatus Lusitanus saith, That he cured one presently with it: The fruit of the Gourd, Cucumers, Mellons and Pom-pions by a certain natural property do oppose this Disease. § 16. If the Cholick proceeds from Wind, you must begin the Cure with Anodyn and emollient Clysters: which if they profit not; you must

give Laxatives of Manna, Oyl of Almonds, and other things in fat Broth : afterwards you must use Discussives. *R* Mallago Wine, Oyl of Nuts, *A*. ℥iij . Aqua Vitæ ℥j . distilled Oyls of Juniper and Rue, *A*. ℥ij . mix, and give it very hot.

§ 17. Inwardly give dulcified Spirit of Niter ℥j or ℥iv . in Bawm or Angelica water : Or Powers or Quintessence of Orange Peels in Canary : some much commend Sperma Ceti mixt with Oyl of sweet Almonds. Outwardly,

you may apply Tacamahacca, or Caranna to the Navel, or you may anoint with the Balsamum Apoplecticum Mynsichti, which is powerful. § 18. If the Cholick tends to, or ends in a Palsy : you must loosen the Belly by many Clysters ; and make the first passages open by a purge : Palmarius used to Cure it with his Syrupus Alarhazi, given in Chicken Broth ab ℥ss ad ℥j : then let the Sick Bath often with an emollient decoction, and anoint the Belly with Oyls of Camomil and Dill mixt with Oyl of Amber : Or with Galbanetum Paracelsi : Let his Drink be Whey and sharp waters : and if it be of long continuance, use those prescribed in the Cure of Hypochondriack Melancholy.

This is approved *R* Horse dung ℥j . Poppy water ℔j . Oyl of Vitriol, gut. x. or xij. infuse, strain, and give it for three Doses.

II. Ἑλκός, Ilcos, Kordapsos, Volvulus, Miserere mei, Iliaca passio, the Iliack passion, or Vomiting of Excrements.

§ 1. The Cure of this Disease has respect to the variety of the

Causes : if it comes from hardened Excrement or thick viscous slegm, the matter is to be softened by emollient and laxative Medicines. First therefore exhibit Enema ad

Iliacam Passionem Mynsichti, Or Enema Emolliens Schroderi, and if Wind abounds you may mix Carminatives therewith, as Oyls of Bay and Juniper berries if these move not, you must give stronger, as a Clyster of Milk, Honey Oyl and Tincture of

Coloquintida. § 2. Outwardly, apply to the Belly a sheeps Paunch hot, or warmed in hot water, or mollifying Baths which are better : so also emollient fomentations and liniments to the whole Abdomen.

§ 3. The matter being somewhat mollified, you must evacuate first, with gentle purges, then with stronger, and at last with the strongest. Barbet saith, That no Disease will endure stronger Purging than this which is caused by hard excrements.

R Troches Alhandal, gr. vj. Diagridium gr. xv. Tartar Vitriolate gr. vij. Salt of self heal, Cremor Tartari, *A*. ℥j . mix and make a Pouder for one Dose : Or this : *R* Whey of Goats milk ℥iij . Oyl of sweet Almonds, Pulp of Cassia new drawn, *A*. ℥j . Syrup of Corn Poppies ℥ss . mix them. Or you may give Vinum Rhabarbarum, or Vinum Purgans Mynsichti.

§ 4. In the mean season, you must also give inwardly Oyl of sweet Almonds either alone or mixt with White wine ; and if the pain be great you must mix with it Syrup of Poppies, as in the former Section we advised : Anoint the Belly also with this : *R* Oynment of sow-bread ℥j . Oynment

ment of Marsh Mallows, Oyl of Camomil, Quercetans Oyl of Colocynthis, A. ʒss. mix them. § 5. If it comes from Wind, you must give Clysters of Sale and Sulphurous things, and those other Medicines prescribed in the Cure of the Chollick. § 6. If it comes from humors whether thick and viscous or sharp and biting, you must give Clysters which attenuate, and kill acrimony, which is done by astringents, among which Salt of Tartar is none of the meanest: then evacuate with this. R. Houfleeke, Sowthistle, A P. ij. Rhenish Tartar ʒv. Tamarinds ʒj. Seeds of Melons ʒiij. boyl in Barley water: to ʒss of the straining add Syrup of Roses Solutive ʒijss. mix for a draught: Or give Hiera picra mixt with cooling things. § 7. If it comes from an Inflammation of the Intestines, you may apply Cupping Glasses with Scarrification to the Groins, as also emollient and cooling Clysters: you may make the Clyster of new Milk, Sugar and the White of an Egg, or Mucilage of Eleabane Seeds ʒj. Or, Oyl of sweet Almonds, Barley cream strained, Sugar and fresh Butter: Or you may make it of simple Oxycrate, which give every day, it allwages pain and takes away the Inflammation: Outwardly anoint with Oyl of sweet Almonds, mixt with Oyl of Amber, after a fomentation with Oxycrate. § 8. Inwardly, give Oyl of sweet Almonds to ease the pain; also cooling emulsions and Fulebs: let their drink be Barley water: and let them abstain from food for twenty four hours, that some of the matter may be consu-

med; for the chief business in this Cure is abstinency; and therefore the Sick ought for four or five days to take every day but three or four Spoonfuls of Chicken Broth, that Vomiting may be hindred, which encreaseth the Disease: for the Food strengthens not the Sick; nor turns to nourishment, but is Corrupted, and the Chyle goes from the Stomach to the Guts; and so is mixt with the Excrements. § 9. If it comes from a Rupture of the Guts falling into the Loops: you must replace the Gut by long fomenting the part with an emollient Decoction, relaxing Oyls; often giving emollient and carminative Clysters: if they be inflamed you must Bath with cold water: if extended with Wind; discuss by fomenting with S. V. the sick all the mean time lying with his Head low, and his Thighs high. § 10. If it comes from Circumvolution of the Intestines through Wind, it is cured as you cure a stultent Chollick: but after the long use of those things no good is to be done, but all things are still Vomited forth, another course is to be taken. Sylvius de le Boe, Prax. lib. i. cap. 15. saith, As often as the lower part of the Gut gets under the upper, so often there is hope of Cure by Meats taken down, or by leaden, or golden Bolders, swallowed down with Oyl Olive, or Oyl of sweet Almonds: but not when the upper parts gets under the lower, because the part of the Gut which is closed goes farther by degrees, from whence the passage is made more nar-

row, and the descent of the excrements hindred. In this last case, the blowing of Wind up into the Body with a pair of Smiths Bellows is convenient, by which means the Gut is stretched and restored to its natural scituation : after which you ought to give an emollient Clyster, with Troches of Albandal, to bring out the ordure, as Hippocrates adviseth, *de Morbis, lib. 3. Text. 15.* Paracelsus shews another remedy, by which he cured many at Deaths door, viz. by drinking Quicksilver ℥ij in water alone, because by its weight it opens the Guts and expels the Excrements, which thing is also commended by others to be done without harm : but so great a quantity Riverius fears may do hurt, by extinguishing the native heat with its coldness and so coagulate the Blood : he advises to ℥ij to be given in a rere Egg, and to repeat it, if the first Dose does not : Mercury killed with Sulphur and made into the form of a Poudre, and exhibited in a Wax ball has been approved ; and Balls of the *Regulus of Antimony*, are also very useful : Oyl of Saturn is commended by Hartman, given gut. vj. in a glass of Sack. Lastly the Blood of a Bat anointed on the Hypochondries is confirmed to be of force by wonderful experience.

III. *Δυσεντερία*; Dysentery, The Bloody-flux.

§ 1. The Indications of the Cure of this Disease are six fold : the offending humor is to be tempered : and allayed : the pain is to be asswa-

ged : the parts are to be cleansed : the evil matter evacuated ; the Ulcer is to be dried and consolidated ; and the flux is to be stoppt, and the parts strenghtned. § 2. The humor is tempered by the exhibition of Alcalies, among which Poudre of Pearl, red Coral prepared, and prepared Amber, as also *pulvis ex chelis Cancrorum* are excellent. § 3. The pain is asswaged by things cooling and emollient, given either by the Mouth, or by Clyster. Julep of Roses is good here, Almond Milk, Barley Cream, Emulsions of the cold seeds : By Clyster you may give Anodyns made either of Milk alone : Or Milk with two or three yolks of Eggs : Or with the Mucilage of fleabane seeds, *A. ℥iv. with Sugar or Honey of Roses ℥j. Oyl ℥ij.* Or you may make it of some cooling emulsion, Mutton, Chicken, Capon, or Sheeps-head Broth : Or of Milk boyled with *Althea* roots : If there be an Inflammation of the Guts, make a Clyster with Rosewater and Saccharum Saturni, fomenting the Belly with Oxycrate ; also *Saccharum Saturni* may be given with Conserve of Roses *ad gr. x.* If the pain be great, you must mix with the Clyster *Philonum Persicum ℥j* or *ij.* *Pil. de Cynoglossa ℥j* or *ij.* Syrup of Poppies ℥jss : or *Laudanum gr. v.* or *vj.* § 4. The parts are cleansed chiefly by cleansing Clysters made of Barly water, Bran, Sugar or Honey of Roses : Or of Turpentine ℥j dissolved with the yolk of an Egg : Or of Oyl of Wax ℥j . Cream of Barly with Sugar doth cleanse and cool : juyce of Alehoof is powerful in

this

this Case, given both by the Mouth and by Clyster. If the Ulcer is more foul, you must use greater cleansers, as Beets, Parietary, Endive, &c. the strongest are, Centaury, Wormwood, Gentian, Birthwort, Salt Brine, Liquor of Tartar, &c. Sometimes you must mix with these cleansing Clysters, astringents, as *Acacia*, *Hypocistis*, Conserve of Sloes, *Sanguis Draconis*, Bloodstone, fine Bole, *Terra sigillata*, Troches of Amber, White Troches of *Rhass*, juyce of Madder taken out with Plantane water: but you must be very careful of them, and use them cautiously, for fear of farther mischief.

§ 5. The evacuation of the evil matter is now to be considered: you must purge often, and that at the beginning, that the corroding humors may be emptied: you may purge every day, every other or every third day, as the Patient can bear it; Rhubarb is said to be the best for this purpose, given in substance in Broth or made in a Potion, first of all raw, after torrifed, that it may a little bind: Barbet saith, It is the best thing for these colder Countries. He commends this: *R Extract of Rhubarb, gr. xvj. Laudanum gr. j. Oyl of Mint, gut. j mix and make Pills for one Dose.* Here also you may use Infusion of Damask Roses: Decoction of Myrobalans, Broth of Tamarinds: Infusion or Pouder of Mechoacan, by whose frequent use the Belly is drved. This following is good, *R Tamarinds ℥ss. Citron Myrobalans ℥ij. boyl in Barly water: strain, and infuse*

therein Rhubarb ℥jss. yellow Sanders ℥ss. strain again and add Syrup of Roses Solutive ℥iv. make a Potion. Or this: *R rinds of Cheb Myrobalans ℥x. Citron Myrobalans ℥v. Curans ℥ij. Water ℥liv. boyl to the Consumption of one pint: add Sugar ℥jss. clarify and put to it Cinnamon ℥ss.* If you would purge more, by reason of plenty of humours, you may mix *Diacatholicon*, or other mild things; but you must beware of strong. § 6. The evil matter being evacuated by stool you must now come to cleanse the Stomach if you find it foul, or depraved in its functions, or the Sick inclinable to Vomit; for it makes a Revulsion of the humors from the part affected; and this Hippocrates sect. 6. Aph. 15. taught. After a long flux of the Belly (saith he) if a Vomiting come of it self, the Disease is cured. *Angelus Sala* prescribes this Vomit. *R Salt of Vitriol ℥ss. or ℥j. Syrup of Quinces and Betony water, A. ℥j. Cinnamon water ℥x. mix for a draught.*

§ 7. Now we must come to the drying consolidating and healing of the Ulcer. And this is done by using in Clysters. First gentle dryers, a little astringent, then such as are more drying and binding. The Clyster of *Angelus Sala*. *R a Sheeps Head cloven in two: boyl till the flesh comes from the Bones: strain, and add Tops of Hypericon, Mijj. Tormentil roots grossly bruised ℥ij. Infuse four hours on the Embers: strain, and give it thrice as a Clyster.* Or, *R Roots of Comfrey, Mullein, Snakeweed, Tormentil, A. ℥j. leaves of Comfrey, Plantane,*

A. Mj. Red Roses ʒss. Balauftians, Myrcles, A. ʒij. boyl in spring water, strain and to ʒij thereof, add Honey of Roses ʒj. white of one Egg, or Mucilage of Gum Tragacanth ʒj. Goats Suet ʒij. juyces of Tarrow and Knotgrass, A. ʒj. make a Clyster. Juyce of Plantane alone, or with Milk or Barley water is commended: Or Gum Tragacanth, or Arabick, or Frankincense, or Mastick, or Sarcocol ʒij. dissolved in Plantane water is good, for these work by glewing, without exasperating the Ulcer: but after such as these, it will be good to use sometimes cleansing Clysters, and cleansers mixt with astringents. § 8. While these Clysters are giving, you must give by the Mouth things of the same Nature: Let the Sick drink plentifully Cows milk: and if there is a Fever, mingle it with water, or give it boyled with Eggs: often giving a decoction of Tormentil Roots, red Saunders, Avens, Balauftians, Pomgranate Peels, Nutmegs roasted in Embers and taken in red Wine: give Cows or Goats Milk mixt with Sugar of Roses: raw Services are said to cure a desperate Dysentery. Bread made of Barleyflower with yolk of Eggs and eaten with Milk and Sugar, is an excellent healer: Or Cream of Rice: Or Rice boyled in Milk with yolks of Eggs and juyce of Ground Ivy: Or decoction of Burnet given for ordinary drink: Or decoction of Greenish Orange Peels in Water drunk, as aforesaid: Or powder of a dead Mans Skull given ad ʒj in Broth, for

some days, which is a specifick: Or Mucilage of Gum Tragacanth in Broth: Or Gelly of Hartshorn: Or juyce or Rob of Quinces: Or juyce of Pears and Cornel Berries or other sharp fruits so boyled: Or the Broth of the fat Guts of a Sheep mixed with a little sweet Oyl: it cures at once or twice taking: Or Oyl and Rose-water ana, drunk: Or Chalybeated Milk: Or the yolks of hard Eggs mixed with Rose-water and taken with Sugar and Nutmeg three or four times. Or fine Bole given ad ʒj in Broth; this Cures if good purging went before: Or the Pouder of Elderberries, which is experimentally approved by Quercetan: Or the Mycleta Nicholas: Or the Oak Grape, found at the Root of the Oak in the Spring time, of a binding rast, purple color without, and white within, which dies in Summer and turns to a stick: Or Bread twice baked, boyled in Vinegar and dried, with which Broth may be crummed: Or a young Pigeon stuff with Wax, roasted and eaten at a Meal: Or Syrup, Tincture and Pouder of Coral, to be often take: Or the juyce of Plantane given alone ad ʒij. or iv at a time, or mixed with other proper things: Or a Roasted Quince, first made hollow, and filled with scrapings of Virgin Wax; eaten for some days: Or the juyce of ground Ivy, which as Hollerius saith, Hath saved many a Mans life: Or in the end of the Disease the Syrup of the juyces of Wormwood and Mint, and given with Treacle water: Or

Or the Tincture or Essence of Emeralds, which is the most absolute thing. To this purpose also there is commended the roots of Bistort, Tormentil, Plantane, Mullein, Comfrey, Snakeweed of Virginia, leaves of Shepherds purse, Horstail, Yarrow, Myrtle tree, Oak, Sanicle, Mouse-ear, Agrimony: flowers of Pomgranates, red Roses: Seeds of Sorrel, Flixwort, Poppy, Sumach, Myrtle-berries, Grape-stones, Medlars (which, according to *Forestus*, cure old Dysenteries) Cypress-Nuts, Nutmegs, *Acacacia*, *Hypocistis*, burnt Ivory, Dragons-Blood, Mastich, Clodders of Hares Blood, Bezoar-stone, *Crocus Martis*, sweet earth of Vitriol, Oyfter-shells calcined, Ox-Bones calcined, *Lapis Hematitidis*, juyce of unripe Grapes, Astringent red Wine, &c. § 9. Among singular Compounds we have these: The Powder of *Forestus*. R *Citrine Myrobalans*, *Rhubarb* a little *Torrefied*, A ʒj. make a Powder for one Dose. The Syrup of *Riverius*: R syrups of the juyce of Grapes, of Myrtles, of juyce of Plantane, of dried Roses, of juyce of Purslane, A ʒj. mix them. The Powder of *Hercules Saxonia*: R calcined Cuttle bone ʒij. Sponge dipt in Pitch and burnt, Egg-shells (the inner skins taken away) A ʒj. make a Powder. Dose ʒj in proper Liquor. The Lozenges of *Deckerus*. R *Species Diarrhodon Abbatis* ʒj. burnt *Hartsborn*, *Crocus Martis* adstringens, A ʒij. choise *Cinnamon* ʒij. Bezoar, Confect of *Alhermes*, A ʒj. with Sugar q.s. dissolved in Plantane and Cinnamon water make

Lozenges. An Electuary of the same. R Conserve of red Roses, *Diascordium*, A ʒij. Confectio de *Hyacintho* ʒj. Balsam of Sulphur or Peruvian Balsam ʒss. Savings of the Pizzle of a Whale ʒls. *Cinnamon* ʒij. Syrup of Myrtles, q. s. make an Electuary: Dose the quantity of a Nutmeg. Or this Electuary: R Old Conserve of Roses, Quinces, and Comfy roots, A ʒj. Coral prepared ʒij. *Crocus Martis*, fine Bole, *Terra sigillata*, Nutmegs, A ʒj. *Spodium* ʒij. with Syrup of Myrtles, q.s. make an Electuary. A Powder of Snake-weed Compound: R Snake-weed and Tormentil roots, A ʒj. red Coral and Pearl prepared, A ʒss. make a fine Powder: Dose ʒj in Broth: If you desire to Glutinate add Flea-bane seeds. A Powder of Coral Compound. R red Coral prepared ʒj. Pearl prepared ʒvj. *Lapis Hematitidis* ʒiv. Nutmegs ʒij. fine Bole, *Hartsborn* burnt, Mastich, Gum Tr *gacanth*, Arabick, A ʒj. make all into fine Powder. § 10. Now these things are particularly to be observed as *Crato* saith, That before the Ulcers of the Guts are well cleansed, viz. before the seventh day, no Astringents are to be given at the Mouth, nor externally: but after the seventh day, gentle Binders may be admitted: and therefore it is good after gentle purging to give for many daies astringents and dryers, as fine Bole, *Terra sigillata*, powder of Elder-Berries, of Corals, &c. with Sugar, till the Sick is well: but if you find that too much binding does hurt, you must purge again, then bind again, after purge again:

and this note, That the aforesaid Barbs are profitable both to bind, and to oppose the evil and malign quality of the Disease : and if any obstruction is feared from their use, it is taken away by mixing Sugar with them.

§ 11. What yet remains is to make a perfect stop of the flux; and to strengthen the parts of late afflicted. This is best performed by Narcoticks given at the Mouth which do wonders, as Our Confectio Anodyna, or Laudanum given in red Wine. Poppy water, or Chalybeate Milk. Or this : R. Roch Alum ʒj. Laudanum gr. i. dissolve in water and drink it, it cures a Dysentery. These Narcoticks do not only take away pain, and provoke sleep, but also perfectly stop the flux, refresh the Spirits, and strengthens the parts weakened.

R. Old Conserve of Roses ʒij. Laudanum gr. iij. Confectio Alhermes ʒss. mix and make a Bolus. Or this of Barbet : R. Sargus Draconis gr. xxv. Laudanum gr. ij. Cinnamon ʒiv. Mint water, Syrup of Camfrey, A. ʒi. Plantane water ʒij. mix, and give it by Spoonfuls. Or this : R. Conserve of red Roses, of Mint, A. ʒi. Orange pee scandied ʒvi. Oxes bones calcined, red Coral prepared, A. ʒjss. Diascordium ʒij. Acacia ʒij. Syrup of Myrtles q. s. make a soft Electuary : let the Sick take of ten of it ʒj at a time. Or this.

R. Laudanum gr. iij. make it into six Pills, of which give the sick one every hour, till the flux is stoppt.

§ 12. As for Topicks, these following are most commended : R. expressed Oyl of Nuts ʒjss.

distilled Oyl of Mace ʒi. seeds of Poppy, Henbane, Myrtles, A. ʒjss. mix and make an Oyntment to anoint the lower parts of the Belly : Or anoint with Oyl of Roses Omphacine ; and if the Stomach be affected, Oyls of Mastich and Wormwood. The Countesses Oyntment is here approved ; Or a Cataplasm of Treacle and sealed Earth to the Belly ; Or this Emplaster : R. Venice Treacle ʒj. Terra sigillata ʒij. Crocus Martis ʒj. Extract of Tormentil ʒss. mix and make a Plaster.

§ 13. If the Guts be only a little corroded, and the Disease be in the beginning, you may exhibit the Clyster of Platerus, made of the hot Blood either of a Man or Beast, for it doth wonderfully stop and cure the Flux : but if the Guts be much exulcerated, give this. R. Turpentine dissolved with the yolk of an Egg ʒij. powder of red Roses ʒij. Diascordium ʒjss. Cows Milk ʒviij. make a Clyster to be given three times a day : Or this which is better.

R. Cows Milk chalybeated ʒviij. Venice Turpentine (dissolved as aforesaid) ʒss. Honey of Roses ʒj. Balsam of Sulphur with Turpentine ʒi. mix for a Clyster. § 14. If a Dysentery is caused by things External, as Poisons ; you must exhibit Vomits, and give things which dull the corrosion, as Milk, Rice, fat Broths : chiefly Antidotes as Emeralds prepared gr. vi. but the Sick must Sweat, and abstain from Food ten hours. Or let the Sick purge very strongly, after drink warm Milk, new Treacle, &c.

§ 15. If the Dysentery be Epidemical or Malignant, you must

give

give Alexipharmicks, among which are Harts-horn, Terra sigillata, Corals, Saphirs, water germander, Pulvis Bezoardicus, Bezoar, and other sudorifick Medicines, which discharge the matter and cure the Disease; and here all things good against a malignant Feaver are proper, as Aqua Theriacalis, Unicorns horn, Amber, Contrayerva, Virginian, Snake-toot, which things may also be mixt with Purgers; § 16. *Observations.* A Nurse being troubled with this Disease, used nothing but the Poulder of Rhubarb once, and Pills of Laudanum, which were often repeated, together with the Clyster of Turpentine at § 13. and in 14 days time she was perfectly cured. Another Woman Plethorick had every day 60 Bloody stools, she used the same thing with the former, and was cured in twelve days.

IV. *Νευτερις*, Lienteria, A Flux of matter.

§ 1. In the Cure of this Disease the Cause is first to be taken away; then the Symptom to be stayed by Astringent means. § 2. If it be by default of the retentive faculty, through too great a refrigeration of the Guts; you must evacuate the matter by Vomit or Stool, with Cheb and Citrine Myrobalans, Tamarinds, Rhubarb, &c. then you must strengthen the Stomach with Distilled Oyls of Wormwood, Mastich, Mint, &c. Order a good Diet with Wormwood Wine. Or through a great Laxness from the too great use of Fat. Oily and loosning things; you must give Absterfives and Acids:

Or a Clyster in which white Vitriol *℞ij.* is dissolved. Or through a thick and smooth scar, such as is wont to follow a great Dysentery, and a deep exulceration: this must be rubbed off and cleansed by eating of sharp things, attenuating and strong absterfives; such as Mustard seed, Onions, Garlick, Honey of Roses, Oxymel of Squills, Infusion of Agarrick and Mechoacan, Diacassia with Whey, adding also things a little Astringent. § 3. If it be by default of the expulsiu faculty, by an Ulcerous disposition in the Stomach and Guts, known by a sense of pain and gnawing in the Stomach, and no Celiaca going before; if the Stomach be affected you must avoid Vomits and fat things, but loosen the Belly with Lenitives, having some astringition; if the Guts be affected, Vomiting is good. Or if it be through sharp humors generated there, or falling from some other part, chiefly the Liver, you must abate the sharpness with Oyl or Salt of Tartar, in Decoction of Barly, Succory and other cooling things; and if it continues long, you must give Rhubarb prepared in Rosewater. Or from taking of Poyson, you must mix Alexipharmicks with juyce of Dittander and Syrup of Pomgranates. § 4. If it comes from Flegm it is to be cured by those things prescribed in the cure of want of Appetite coming of a cold cause, chusing the most astringent: you must begin to purge with Rhubarb, Aloes, and Myrobalans: after purging you must strengthen with Opiates, Astringent Tinctures, Wines

Wines, Pouders, Plasters, and other things mentioned in the former section of the Dysentery: this is commended by Amatus Lusitanus, *Rx* old Conserve of Roses $\mathfrak{z}\text{vj}$. Venice Treacle $\mathfrak{z}\text{j}$. Syrup of Quinces q s . mix and take half an Ounce every morning. § 5. If it comes of Choler, it is to be cured by those things prescribed against Cholerick Vomings, wherein Salt of Tartar and red Coral prepared have chief place.

V. Διάρροια, Diarrhoea, a Looseness.

§ 1. The Cure is to be begun by evacuating of the matter offending by purging Medicines which Astring, lest the Flux should be increased by motion of humors, by Rhubarb in substance, Mechoacan, Tamarinds, Myrobalans: Syrup of Roses Solutive, Diacatholicon, Pulvis Cholagogus Quercetani, Tinctura Cholagoga Grulingij. § 2. You must make revulsion by Vomiting with Sal Vitrioli, Oxymel Scyllitick if need be; By Diureticks, as Salt of Tartar, Broom, Lignum Nephriticum; by Sudorificks as, Liquor Vitæ Anodynus, Bezoar Stone, Bezoar Minerale, powder of Vipers; by Ligatures and Frictions; and by cleansing Clysters, which are to be given both before and after purging, as Enema Carminativum Mynsichtii: or this, *Rx* Barly broth a pint; Spanish juyce of Liquorice white Starch, A. $\mathfrak{z}\text{ls}$. Syrup of Roses $\mathfrak{z}\text{ij}$. Yolks of Eggs N° . ij . dissolve and make a Clyster. § 3. The body being sufficiently cleansed, you must give Astringents and Serengethners, both by the

mouth and by Clysters. Among Simples the chief are, *Roots* of Tormentil, Plantane, Avens, Sloe tree: *Leaves* of Bramble, Plantane, Loostrife, Shepherds purse, *Seeds* of Plantane, Cressles torrified: *Flowers* of Roses, Pomgranates: of *Spices*, Nutmegs, Cinnamon: of *Fruits*, powder of Elderberries: of *Minerals*, fine Bole, Terra Sigillata, Crystal, red Coral prepared, Terra dulcis Vitrioli, Crocus Martis: burnt Harts horn, Mans bones calcined, old Conserve of Roses, Spemniolæ Compositum; Emulsions of the 4 cold Seeds, Poppy seeds, Chalybeat milk; together with all those things enumerated in the cure of a Dysentery, Pulvis Dysentericus Crollij, Pulvis ad Casum, Or powder of unripe Bramble Berries, Forestus commends the use of Medlars to be eaten though green, which is confirmed by experience to be an admirable thing. Riverius commends Mercurius Diaphoreticus given some days together gr. xij. at a time, because it takes away all impurities: so also this, *Rx* Conserve of Roses $\mathfrak{z}\text{ij}$. Bezoar Mineral gr. x. Crocus Martis gr. vj. Spirit of Vitriol gut. vj. mix for a Bolus to be taken twice a day, long before and after meat: Or this, *Rx* Juices of spotted Arsmare and of the great Housleek, A. $\mathfrak{z}\text{ij}$. boyl till a third part is consumed, which give in the morning, it doth certainly cure any Flux though very old: Or this: *Rx* Juniper berries well bruised, M j. red Wine \mathfrak{ss} . boyl them to the Consumption of the half, strain and take it 3 days

days together; it derives the matter of the flux to the Ureters: so also the powder of Grasshoppers given *ad 3j.* in White or Rhenish Wine. § 4. If a Diarrhoea proceeds from a Catarrh, you must direct your Intentions to the Brain and parts which send it, as we have directed in the Cure of that Disease. § 5. Lastly, if all we have hitherto said, proves ineffectual, you must give Mithridate, new Treacle, Diascordium, Philonium Romanum, Liquor Vitæ Anodynus, Our new London Treacle, Laudanum, &c. which kind of Medicines quiet the motion of the humors, and perfectly stop all Fluxes: let the Diet be steeled with water or steeled Milk, Emulsion of sweet Almonds in Tormentil water, or Decoction of Oak leaves, Bisket bread and such like.

VI. Τενασμὸς Tenasmus, Often going to Stool without avoiding Excrements.

§ 1. The Cure hereof differs little or nothing from the Cure of a Dysentery: you must evacuate the sharp humors with purges which leave a binding quality behind them; the chief of which is Rhubarb, which must so often be given till the humor seems to be spent. § 2. If there is much pain, you must use Clysters Anodyne, cleansing, glutinaring and Astringent, according as the Ulcer requires, the forms of which you may find in the section of the Dysentery; but then you must observe, First, that the Pipe be cautiously conveyed in, lest the pain be increased: Secondly, that you give them often, and but in little

quantity, viz. to about half a pint, because of the continual desire of going to Stool. Injections or Baths to sit in, made of Emollients and coolers; Or, of the broth of Sheeps heads and feet, are good here. § 3. Put up suppositories that are mild and gentle, to heal the Ulcer: those made of Goats suet, cut into the form of a Suppository are admirable, for they ease pain and heal the Ulcer: but they will better ease the pain if you mix therewith fine powder of Poppy or Henbane seeds; Or rather gut. iij. of their expressed Oyls to every Suppository: Or Opium gr. j. dissolved in ʒj. of Oyl: and the Ulcer will sooner be healed if you first dissolve the Suet, and then mix the Narcotick with Mucilage of Gum Tragacanth: Or, with powders of Tutty, Ceruse, fine Bole, Balauitians, &c. which dry without Acrimony. § 4. If the Disease seems desperate you may use Narcoticks both inwardly and outwardly: but Laudanum gr. iij. or iv is best given with Massich and Terra Sigillata: Or, mixt with Clysters of a Decoction of Camomil flowers. § 5. If it be from too great cooling of the Right Gut, you must use Decoction of flowers of Mullein, Camomil, Melilot, Dill, with seeds of Flax, Fænugreek, Bran. § 6. If it comes from Causes producing a Dysentery, it is to be cured as a Dysentery: often give a small Clyster of Mutton broth with a few drops of Oyl of Wax or the Mucilage of Flea-wort and Quince seeds in Nightshade water, adding fine Bole, or Alces wash. § 7. If it be from Cold or Wind,

Wind, give a Clyster made of the Decoction of Camomil with a few drops of Oyl of Bay-berries, § 8. If it comes from humors sharp and Choleric, or Sale and Flegmatick, give a Clyster of Almond milk, or Barly Cream, mixt with Oyl of sweet Almonds ℥j. in which Oyl of Tartar ℥ij. is mixt, and a few drops of Oyl of Wax are enamed.

VII. Ἀιμορροΐδες, Hæmorrhoidia, the Hæmorrhoids or Piles.

§ 1. *In order to the Cure hereof, Revulsive remedies are first to take place, as Frictions and Ligatures of the superior parts, Cupping-glasses applied to the Shoulders, Breast and Hypochondries, which may be done with Scarrification, but they must often be applied to the said places.* § 2. *Secondly, make derivation by purges of an Astringent quality, as Rhubarb, Myrobalans, Tamarinds; which last (as Mercurialis saith) have an especial power to stop this kind of Bleeding: with these it will be good to give Diacassia, and things which keep the Belly soluble, for when it is bound, by straining to discharge the hardned Excrements, the Disease will be the more exasperated and increased.* § 3. *You must rectify the ill quality of the Blood above all things, for that is the chief cause of the Flux of the Hæmorrhoids: if it be sharp and choleric, it is altered with Infusion of Rhubarb and Tamarinds, Salts of Tartar, Wormwood and Tamarisk, &c. If it be hot and thin, you must thicken it with cooling Medicines: If it be watery, you must use Diure-*

tics and Dryers: if it be much let the Sick have a slender Diet for you cannot hope to stop the flux of the Hæmorrhoids, except the Original Cause which lodges in the Blood is first taken away. § 4. *The next Intention is to stop the Flux of the Blood, which is done chiefly by Astringents externally applied, for which purpose almost all those prescribed against an Hæmorrhage may be used here. A Specifick in this Case is a fomentation of Mullein in Smiths water or Astringent Wine, for it both eases the pain and stops the bleeding: Or a fomentation of beaten Acorns and Oakleaves: Or this, ℞ Snake-weed roots ℥ss. Mullein, Bramble berries not ripe, Oak buds, A.M. iijss. Sumach berries, Balauistians, Pomgranate peels, green Gauls, A.M. j. Alum ℥j. Myrtles ℥ij. White Vitriol ℥j. boyl all in Forge water p. iij. Old red wine p. j. for a fomentation: you may anoint the back and Hæmorrhoids with Unguentum Astringens or Comitissæ: Or apply this Cataplasim, ℞ fine Bole, Terra sigillata, sanguis Draconis, Olibanum, A. ℥j. Grape stone, mans Blood dried, Aloes, A. ℥j. with the white of an Egg and juyce of Plantane mix them. Or make a Cataplasim with the Hairs of a Hare burnt, and Spiders Webs mixt with the White of an Egg.* § 5. *If the Hæmorrhoids be internal, put up Suppositorum Stypticum Mynsichti, Or make injections into the part with a syring of juyce of Plantane, or other Astringents: Or of the Blood of any Creature new drawn*

drawn while it is hot, for that doth wonderfully restrain any flux of Blood: So the Lungs of a Sheep hot and Bloody, being fit upon, have a great power; to which add most of those things mentioned in the Cure of a Dysentery. § 6. Inwardly the Pills of *Bdellium*, both without and with the *Myrobalans* are much commended: so also the Essence of *Mars*, as also the Conserve of *Roses* with fine *Bole*. § 7. If the pain be very great, you may apply *Crocus Metallorum*, which abates the pain and consumes the swelling: excellent are the ashes of *Cork* with *Capons grease*: Or a Girdle of the green leaves of black *Hellebor* bruised and tyed about the naked Body; applying to the Piles, *Opium* dissolved and mixt with the yolk of an Egg, Or *Sacharum Saturni* with Butter. But the most admirable thing of all is the Oyl of *Amber* either alone or mixt with equal parts of Oyl of *Almonds*, to anoint them with, for it gives ease in a moment, comforts and strengthens the part, and dissolves the Tumor, at four or five times using: I have tried the Experiment several times upon my self. Oynments of *Toad-flax*, and of *Pilewort*, are specifics in this Disease. § 8. If they swell much and will not Bleed, apply *Leeches*, then anoint with an Oynment made with the Pulp of *Colocynthis*, and keep the Belly soluble with *Diacassa* mixt with *Srupus Succorum*. § 9. If they ulcerate, cleanse them, then anoint with *Unguentum Astringens*: Or the fat of an Eel, which drops out as it is roasting: Or let the

sick receive the fumigation of *Mullein*, by a narrow pipe put into the Fundament, after which put to them fine *Bole*, *Alum*, or other *Astringents*. § 10. During the whole time of the cure let the sick drink ordinary *Iron water*, or decoction of *Farrow*. § 11. For the prevention of their return again, the sick ought to keep a good and sparing diet: purge often with proper cooling *Catharticks*; evacuate *Melancholy*: open *Obstructions* of the *Liver* and *Spleen*, by often taking Pills of *Steel*: and drink for a Months time the Decoction of *Mastic wood*, or its Infusion in *Wine*, it stops the *Hæmorrhoids* and strengthens the Stomach.

VIII. *Ελμυντες*, *Lumbrici*, seu *Vermes*, *Worms*.

§ 1. The Cure of this Disease is done by killing the *Worms*, and driving of them out, and destroying the morbidick matter which breeds them. § 2. *Worms* are killed by things, which are *Acrid*, *Bitter*, *Salt*, or *Enemies* to their property: these if given by Clyster ought always to be mixt with sweet things: if by the Mouth, sweet things ought to be premised: with these Oyl ought to be mixed, with *Cheese butter*, which Authors say they exceedingly fear: § 3. The chief things which kill them are *Coraline* in Powder ad $\mathfrak{z}\text{ij}$. *Wormwood*, *Centory* the less, *Peach flowers*, *Myrrh*, *Aloes*, *Zedoary*, juyces of *Radish*, of *Cresses*, *Harts-horn* burnt, juyce of *Endive*, *Purslane* and *Grass* water, with a little *Vinegar* and *Sugar*. *Hiera Picra* given ad $\mathfrak{z}\text{ij}$, is excellent. Or this, \mathfrak{R} *Warmseed* $\mathfrak{z}\text{ls}$. *Coraline* $\mathfrak{z}\text{ij}$. *Harts-horn* $\mathfrak{z}\text{ij}$.

*Zij. make a powder. Or this of Mencilus: R flowers of Centory the less, Tanſy, Hypericon, A. Zij. flowers of Wormwood, Savin, Peaches, A. 3jss. Roots of white Dittander, Gentian, Asarabacca, Rhabarb, A. 3j. Red Coral prepared Burnt-Harts-horn, scammony, Troches of Alhandal, A. 3ij. Seeds of Artichoke, Purflane, Citrion, Cummin, Seseli, Coleworts. Coriander, Sorrel, Myrrh, Saffron, A. 3ss. Salt of Wormwood 3ss. Coraline 3iv. make a Powder: Dose à ʒj ad 3j. in Cows Milk upon an empty Stomach. Or, R Hiera simple 3ij. Wormseed, Scordium, Centory the less, Coraline. A. 3j. make a Powder. Dose à ʒj ad 3j. Or, R Oyl Olive 3iv. Wine 3iij. Vinegar 3ij. mix and give it, it kills the Worms by choaking and pricking them. Or Salt 3j dissolved in water 3vj and drunk in a Morning fasting. Burnt Hartshorn is much commended by *Foreſtus* given in Raifons. But inferior to few or no other Medicine is *Decoction de Stercore Muris* (which see in *Our Doron lib. 2. cap. 15. sect.* .. Oyls of Vitriol and Sulphur in water are here esteemed: Or a Decoction of Quicksilver in fair water, given three or four times. Or according to *Platerus*, you give ʒss of Quicksilver, (which may be done without hurt;) it makes the Worms crawl out of the Body. *Baricellus* gave Quicksilver ʒij with Conserve of Quinces, to a Woman troubled with Worms, and she avoided downwards above a hundred Worms, and was cured the same day; and he kept continually Quicksilver infused in Water for Children. *Mathiolus**

did the same, so also *Horatius Augenus* and many other famous men: it may be given to Children in substance ad ʒj: to youth ʒij or 3j. mix it with red Sugar in a glass Mortar, stirring it till it is invisible, to which add gut. ij. of Oyl, least it revive again, give it with Sugar of Roses or Quinces. *Baptista Zeppata* gave it thus: R Quick-silver 3j. (but ʒj or ij for little Children) Benjamin ʒss. Aqua Vita, gut. v. mix in a glass Mortar, to which add Conserve of Roses, to be taken in the Morning fasting. Or, R Quick-silver 3j. brown sugar. q. s. water gut. vj. Oyl gut. vij. mix them well together, and give it with Conserve of Roses. *Sanctorius* in *Meth. lib. 5. cap. 11.* saith, That except we use strong Medicines or washed Aloes: Or Aloes made into small Pills with Quicksilver ʒj, with a little Turpentine, we shall do nothing. Those who like not crude Quicksilver, may give this. Take *Mercurius dulcis* gr. xv. scammony gr. vij. make a Powder, to be given in a stewed Prune. But decoction of Quicksilver is an excellent thing. The Tincture of *Coloquinrida* in S. V. is a thing beyond Compare so also *Spiritus Vitæ aureus Rulandi*: Or *Mercurius dulcis* mixt with Flowers of Sulphur and Conserve of Roses. Or the Powers or Quintessence of Myrrh and Aloes. Or strong Spirit of Harts-horn given with juyce or Radishes. Or Q. essence of Tanſy, and *Spiritus ex tribus*. But saith *Hartman.* most excellent is Quick-silver either crude or mortified with juyce of

Lemons à ʒj ad ʒj and mixt with *Diacrocuma*. *Stocheus* commends the Oyl taken out of dried Helle sticks, given to Children à gut. j ad ij. to youth à gut. iij ad iv. in a Crum of Bread, for that it immediately kills the Worms and cast them out; out of the Body by touching of a living Worms it kills it; this is supposed to be *Oleum Heraclynum* of *Rulandus*, with which he cured Children of the Worms in a moment by only anointing their Lips and Navils. An Ancient Emperick commended to me *Ens Veneris* above all things, and I have often used it with the same success. § 4. But while these things are doing, it is necessary that we take care that we evacuate them, and the matter making them, and this is done either by Vomir, Purge, Clyster, or outward application. § 5. Among Vomits the *Aqua Benedicta Rulandi* has the chief place: those who cannot bear it, may take *sal Vatrioli*, or *Oxymel* or *Vinegar of squils*: and a *Carduus Posset* is among some of high Estimation. § 6. Among Purging Medicines *Rhubarb* is said to be the best, for that it may be given both in a flux and in a Fever. R a strong Infusion of *Rhubarb* in Radish water ʒiv. powder of *Rhubarb* ʒij. Syrup of *Roses* or *Cichory* with *Rhubarb* ʒi. mix for a Potion: but if you add *Coraline* ʒss. it will be better. Here *Pilule ex duobus*, *Panchymagogæ*, *Rudij*, with *Mercurius dulcis*, Extracts of *Turbith*, *Rhubarb*, and Essence of *Peach flowers* have place: so also *Pilule Ruffi*, *Syrupus de Spina*

Cervina, *Elixir Proprietatis* with an Alcalie, or with Oyl of *Sulphur*. *Hiera picra* aforementioned given ad ʒij. Or Decoctions of *Sena*, *Agarick*, *Rhubarb*, given once a day: Or *Electuary Diacarthamum*, Or *Diaturbith* with *Rhubarb*, Or *Carocostinum*, (for that they purge Flegm and corrupted Chyle which breeds Worms:) Or *Confectio Hamech*, given à ʒiij ad ʒvj. Pulp of *Colocynthis* à gr. vij ad xvj. or the Tincture thereof: to these add *Pulvis contra Vermes*, and *Pulvis ad Lumbricos magistralis*, (which see in Our Pharm. lib. 4. cap. 21. sect. 51. and 57.) which last is inferior to none. § 7. Clysters are next to be considered, for that they draw downwards powerfully, and expel, and cleanse the parts admirably. R Milk ʒbj. Honey of *Roses* ʒij. *Cassia Extracted* or *Diacatholicon* ʒj. Spanish juyce of *Liquorice* ʒss. dissolve and mix for a Clyster. Or you may use the Clyster *ad Lumbricos Herculis Saxonie*, which is infallible to the Intention being three or four times used: Or you may make a Clyster of the aforementioned *Decoctum de stereore muris*: if they be *Ascarides*, *Enema ad Ascarides Mynsichti*, used twice every hour is admirable. Or R Mutton Broth ʒbj. dissolve in it Honey of *Roses* ʒij. *Hiera picra* ʒij. Tincture of *Colocynthis* ʒjss. make a Clyster: if you would have it stronger put to it Tincture of *Wormwood* ʒss. *Vinum Benedictum* ʒjss. § 8. But this is to be observed that you must often repeat the Purgation, till the Body is thoroughly cleansed, else you do nothing,

thing, for although the body seems to be free, the Worms will breed again : so also you must often give Clysters during the whole time of the Disease, first made of sweet things to attract and draw down the Worms made of Chicken Broth, Sugar and Honey of Roses, Decoction of Liquorice, Raisins, Figs, &c. afterwards of things bitter, and such as have power to kill them.

§ 2. As for Topicks, you may anoint with Oyl in which Colocynthis has been boyled : Or with Oyl of Wormwood : Or with this, *R. Unguentum de Artanisa* ℥iij. Quick-silver ℥j. mix and anoint with it, but be cautious in the use of it, for it is very dangerous if the Sick takes cold : this is more safe. *R. Powder of Colocynthis* ℥vj. Ox Gall q. s. mix and lay it to the Navel : it kills the Worms, and keeps the Belly loose. Or make a Cerate of Aloes, Myrrh and Saffron, with Vinegar and an Ox Gall, which apply to the Stomach, Belly, and Back.

IX. *Ευπεΐσις τῆ ἥπατος*, Obstruction Hepatica, Obstruction of the Liver.

§ 1. The Cure is to be begun by openers, and an universal evacuation of the whole Body, by a Potion agreeable to the humor abounding. Amongst the chief openers is *Riverius* his Extract of Pills of *Ammoniacum*. Take of *Ammoniacum* (dissolved in Vinegar of Squils) ℥iij. species *Hierapicra* ℥jss. Aloes Div. Myrrh ℥j. Saffron gr. vj. mix and make Pills : Opening Tincture of Mars : Decoction, Wine or Sy-

rup of the five opening roots mixed with Salts of Tamarisk and Wormwood. *Quercetani* Syrup of Wormwood, Crystal of Tartar dissolved in new made Chicken and Mutton Broth; and given for several days together : Decoctions of the five opening roots, Salts of Wormwood, Tamarisk, and Tartar, Tincture and Spirit of Tartar, Tincture and Salt of Corals, Tincture and Salt of Mars, *Spiritus ex tribus*. § 3. For purging in this Case, you may exhibit Extract of *Ammoniacum*, with *Pilulæ Rudij* and *Mercurius dulcis* : Or the Pills of *Schroder* : Or *Diacarthamium* : Or an Infusion of Sena with Aniseeds : Or *Quercetani* Pills of Tartar : Or *Sal Virioli* : Or Pills of Steel with many other things of like nature. § 4. The Body being universally cleansed, you must give things which strengthen the Liver, and preserves its Tone, sometimes mixed with gentle astringents; Among these things are *Penotus* his opening Spirit of *Vitriol*, *Tartar Chalybeatum*, *Essentia Martis*, *Pulvis Cachecticus*, *Vinum Chalybeatum*, and some commend crude dust of Iron taken thrice a day à ℥ss. ad ℥ss. Extract of Rhubarb. The Crystals, Salt, and Spirit of Tartar are particularly commended above all things : The Crystals may be given in Chicken Broth, they do Wonders : The Salt may be given in a Loosening Ptilan or Barley water, in ℥viij whereof, Sena ℥ij is infused with Salt of Tartar ℥ss. which will powerfully extract the Tincture of the Sena ; this continued many

ny days opens all Obstructions whatsoever; and *Riverius* saith, That he has seen Quartans cured by it in fifteen days taking of it. Tarrar Vitriolate is of famous use, and so also are several Chalybeat Medicines, after the use of which the Body ought to be well stirred or exercised, among the number of these the steeled wine of *Finkius* is singular, as also the famous Pulvis Cachecticus *Quercetani*, given for some days. Some take the Infusion of Steel in white Wine for ordinary drink for two or three Months together. *Riverius* prepares Steel for this purpose by steeping it in Vinegar in the Sun, till the Vinegar is three times consumed, and then to grind it upon a Marble. But Our way of preparation by some is thought to excel, which is to mix the filings of the Steel, with a third part of Powder of Sal Gem, and a few Drops of water, so will the Steel become Gum-mous and being thoroughly mortified and dried, will be a redish brown Powder; this you may make into Pills with Catharticks, or into a Conserve with Salts of Tamarisk and Wormwood and Conserve of Elecampane roots. But *Mercurius dulcis* with Catharticks doth violently penetrate and open Obstructions: so also this, R. Bear-Mineral gr. x. *Mercurius dulcis* gr. vii. Conserve of Roses ℥ij. make a Bolus to be given many days. § 5. If the Obstruction be in a Choleric body, and hot and dry distemper of the part, you must give cooling and temperate ope-

ners; let his Drink be Decoction of Juniper-berries in water, or the Infusion of *Lignum Nephriticum*; Or Decoction of Eglantine or Sweet-Briar, which opens very powerfully and strengthens, so that many have been cured of desperate Diseases by that alone.

X. *Ἰκτερος*, Icterus, Icteria, The yellow Jaundice.

§ 1. What we have said at sect. IX. may almost be said here: if it be critical, upon acute Feavers it needs no Cure; if it be symptomatic, the Cure depends upon the cure of the Disease by which it comes.

If it be essential from the Obstruction of the Cistis or Bag of the Gall, it is cured by taking away of that Obstruction, which may be conveniently done by the things named in the former Section. § 2. The next thing is, you must take away a part of the Humour with gr. xij. of Gutta Gamba, which is a specifick purge in this Case: Or with this, R. Electuary of the juyce of Roses, Diaprunum solutive, A. ℥ij. R. Rhabarb ℥j. Saffron ℥j. with Sugar make a Bolus which give once or twice. § 3. The humor being evacuated, you must give specificks and strengtheners, and such things as preserve the Tone of the Liver.

For this purpose *Riverius* commends this following Infusion, which being used six or seven days does pluck up the Disease by the roots. R. Maddey roots ℥ss. Celandine M. j. tops of Sea Wormwood, Centory the less, A. P. i. Cinnamon ℥ss. Saffron ℥ss. white Wine ℥viiij. Infuse sixteen hours: strain, and add white Sugar ℥j.

A a a Tacc

Take it in the Morning fasting. If you add *Goose Dung*, *Turmeric*, *A. 3℥s.* it will be so much the better. *Tragea ad Icterus Quercetani* is a famed thing, and perfectly cures at three or four times taking. So also the dried white Dung of a Hen given à 3℥s ad 3j. for several days. To these things add, the Extracts of Columbine and Celandine given with a little Bezoar: An Emulsion of Columbine seeds in Columbine water: the Powder of Earth-worms: the powder of Hog-lice, or Hog-lice swallowed down alive à iij ad xij. for several Mornings fasting, which cures to a wonder: *Dioscorides* and *Forestus* commend the juyce of Horehound, which has cured when all other things have failed. *Zacutus* gives four or five live lice in a Poached Egg, which is a most sordid Medicine. *Gesner* commends this; R *Nettle roots* lbj. *Saffron* 3j. beat them well, and express the juyce with a little white Wine. Dose 3iv every Morning for a Week, sweating after it. Some lay a live Moth on the Navel till it dies: others hang a live Spider about the Neck, to the Pit of the Stomach in a Nut-shell till it dies. § 4. If it comes from Poyson, or Biting of venomous creatures, you must use Venice Treacle, Electuary de ovo, and other Alexipharmick things, especially such as are opposite to the Nature of the Poyson, in which also you must have regard to the manifest qualities. § 5. If it be from Obstructions of the Liver, use what is prescribed in Sect. IX. Or Dod-

der of Vetches, Decoction of Strawberry leaves with Horehound and Raisons, juyce of Nettle-roots, *Cremor Tartari* diluted with steeled Wine; and give purgers with openers, among which *Rhubarb* and *Hiera Picra* are best. § 6. Among Magick things are accounted the Patients pissing upon Nettles: Cloths dipt in Urine and exposed to the Air, with many other things, concerning which see *Petrus*. § 7. Lastly, the Symptoms are to be removed by Topicks: for the Face and Eyes, the fume from hot Vinegar in which *Rosmary* has been boyled is good: but the Obstructions being removed, the yellow color will presently vanish by the strength of the natural heat; yet that it may be the sooner gone, let the Sick sit in a Bath of warm water, and rub the Body therein with a Bag of Barley and Bean Meal.

IX. Εμφραξις τῆς σπλῆνός, Obstructio Liënis, Obstruction of the Spleen.

§ 1. This is performed as is the Cure of an obstructed Liver, only with this difference, that some things be added, which properly respect the Spleen, and prepare and purge Melancholy. § 2. Open with flowers of Broom, and *Saxonia* his Electuary of steel; *Syrupus Succorum*, Extract of Gentian: Extracts of *Crocus Martis*, of Fumetory of Rinds of Capers, roots, of Tamarisk, *Vinum Chalybeatum*, Oxymel simple and of Squills, *Pulvis Cachecticus*. § 3. Purge with Polypody and Dodder of Time with Raisons: *Sena* with *Cremor Tartari*, *Syrupus de spina Cere*

Cervina, but above all with *Mercurius dulcis* given with *Ammoniacum* mixed with *Pilula Ruffa* and Salt of Tartar : Or with Infusion of black Hellebor, *Vinum Antimonij*, juyce of Squils ; or with this : *Rx Ammoniacum* (dissolved in Vinegar of Squills) *℥j*. Extract of Aloes *℥ss* Crystals of Tartar *℥j*. Myrrh, Saffron, *A. ℥ss*. Mastick, Benjamin, *A. ℥j*. Salts of Asch and Wormwood, *A. ℥j*. Oxymel of Squils *q. s.* make Pills : Dose *℞ij* every day. § 4. Strengthen with spirit of Harts tongue, Ectarach, seeds of Corriander, Essence of Borrage and Bugloss, Extract of Crocus Martis, Sal Corallorum, Extract of an Ox Spleen, or Decoction of China used for twenty days after convenient purging. § 5. Outwardly, for Topicks, foment with Vinegar, then apply a Cataplasim of Hemlock, which is most powerful to soften and discuss ; Or a Cataplasim of green Tobacco boyled in Oyl and White Wine : Or strained and boyled to a Liment, after which apply a Plaster of Hemlock : Or *Emplastrum de Ammoniaco Foresti* : Or a Plaster of Simple Ammoniacum dissolved in Vinegar of Squils.

XII. *Χολέρα*, Choleric passion, A violent Vomiting and scouring.

§ 1. The cure in general respects, 1. The furthering of either of the evacuations, if the one be too much, and the other too little. 2. A qualifying of the humours. 3. A strengthening of the parts. 4. A restoring of the strength and spirits. 5. A Mitigation of the symptoms. § 2. If it comes from Discharges of other parts they must be

first cured : But if the cause be in the Stomach only, it comes either from wind or sharp humours, or Inflammation, or Aposteme, or Ulcer. § 3. If it comes from Wind, you must discuss and evacuate the stegmatick matter of which it proceeds, first give *Enema Emolliens Schroderi*, after *Enema Carminativum Mynsichti*, if the pain continues, make a Clyster of Sack or Hippocras and Oyl of Rue, *Ana*. Or of White Wine and Oyl of Juniper, or gut. viij. of Oyl of Cinnamon or Cloves, which do Miracles : after foment the Stomach with Quintessences of Oyl of Carraways and Oyl of Juniper, *Ana* : then anoint with Oyl of Rue mixt with S.V. and a little Oyl of Cloves, and apply a Plaster of Bay-berries. In the Interim, if there is Vomiting, give a gentle Vomit, or *Tinctura Phlegmagoga Grulingij*, and then strengthen with *Diatrion piperion*, or this Juleb, *Rx Wormwood, Agrimony, Centory the less, A. Mss*. Water *q. s.* boyl to *℥v*. strain, and add Sugar *℥j*. this take two Mornings together. *Amatus Lustanus* much commends water of Camomil flowers, and *Forestus* the Decoction, which causes the pain to vanish as it were by Inchantment : but I know by experience, the juyce of the Herb will do it : Bread hot from the Oven, cut in the middle and applied, is of admirable success. If the pain yet continues put the Sick into a discussive and emollient Bath very hot, so will the thick humours be melted, and the pain immediately eased. § 4. If the violence of

pain gives danger, you must give Narcoticks, which have a wonderful effect; Or mixt Narcoticks with Purges, as this of *Helidæus*, *R. Diaphenicon ʒss. Philonum Romanum ʒij.* with Decoction of Camomil make a Potion: Our *Confectio Anodyna*, in this Case, is of excellent use: the pain being gone, use purges once or twice a Month to take away Flegm (the cause of the Wind) and after, such things as strengthen the Stomach. § 5. If it comes of sharp humours or choller, you must evacuate with a gentle Vomir, or Purge with Cholagogues: the Poudre, Infusion or Extract of Rhubarb and Mechoacan are powerful, and many emollient Clysters, not sharp or hot, then qualify the sharpness of the humours with new Milk, Oyl of Almonds, Yolks of Eggs, Emulsions of the cold Seeds, cooling Julebs and such like; moreover you may in cooling things give Salt of Tartar, and other alcalious substances, which alter and quench the fiery heat of the humor: Outwardly, apply a Cataplasme of Bread, Milk, yolks of Eggs and Saffron; Or Bread hot from the Oven dipt in Vinegar: if all these things do no good, you must use Narcoticks, among which the *Laudanum Paracelsi*, or Our *Confectio Anodyna* are the chief, being dissolved in Sack and given at Night going to Bed. § 6. If the pain comes from Inflammation, Apostem, or Ulcer of the Stomach, you must help it, as we have taught in the Cure of those Diseases. § 7. If the matter flows from other parts, as the Liver, Pan-

creas, Mesentery, Guts, known by a malignant Feaver and Convulsions, you are not presently to stop the course of the matter flowing; but if it flows too much, then its course is to be diverted either by Sudorificks to the skin; or by Diureticks to the Urinary passages: after qualify the humours and strengthen the parts. Crystal prepared given ad ʒss. inwardly is of good use: Outwardly apply an Epithem made of Juices of Endive and Purslane with Barly flower; and for the diet give often bread dipt in juice of Pomgranates. § 8. If it comes from matter contained in the Stomach, you must observe, first that the evacuation is not to be stopped where the Sick is strong, and the evacuation not large; and gentle Emeticks are to be given, as also gentle purgers, if the irritation be great and the evacuation small; but if the irritation is small and the evacuation great, astringents and strengtheners are to be used together. Secondly, if Vomiting be excessive, provoke Sooles: but if the Looseness, provoke Vomiting, which you may do with Whey mixt with *Oxymel Scylliticum*. Thirdly, after evacuation, give *Crocus Martis* which stops it admirably: Or a Decoction of Cloves, Mastic and red Roses in red Wine: Or the Decoction of unripe Bramble-berries: Or *Laudanum griij.* which is the best thing of them all. Fourthly, outwardly apply to the Stomach a Sea Spunge boyled strongly in Vinegar.

XIII. *Melancholia*, *ὑποχονδριακή*, *Melancholia*, *Hypochondriaca*

driaca, Hypochondriack Melancholy.

§ 1. The cure consists, first in opening of all Obstructions: Secondly, in tempering of the evil quality of the humours: Thirdly, in evacuating of the Morbifick matter: fourthly, in altering the habit of the Body, and strengthening the weakened parts. § 2. The first intention is performed by giving opening things, such as we have enumerated in the obstructions of the Liver and Spleen, to which in a special manner we may add, roots of Scorzonera, Male fern, leaves of Fumitory, Ceterach, flowers of Borrage and Bugloss, juyce of Apples, Syrups of Apples Compound, of Fumitory, German-der, &c. Steel prepared, acid Waters, Baths, but above all the Volatile Salt, and Spirit of Sal Armoniack, which opens all manner of Obstructions to a wonder. § 3. The second Intention is to temperate the evil quality of humours, which is done by Salt, Tincture and spirit of Tartar, Salt and Tincture of Coral, prepared Coral, Pearl prepared, Bezoar stone, for the most part mixt with the openers, or to be given in the intervals while the opening things are exhibited. § 4. The passages being opened, and the sharpness of the humors qualified, you must now come to evacuate the morbidick matter, which is the third Intention, and to be done by Clysters, Emetics, and Catharricks. § 5. Clysters must be made of such things as may mollify the Bowels and draw powerfully to evacuate the Melancholly humor; for which purpose we commend *Enema Emollient Sabroderi*, mixt with *Aqua Benedicta Rulandi* ʒiij. or which is

better *Enema specificum Mynsichi*, which ought to be often repeated, because the humours are very tough and rebellious. § 6. Emetics are to be given (but with caution) if the matter offending lyes mostly in the Stomach; or if there is a heaviness, and loathing; or a depraved or lost Appetite, or if there be great Obstructions from preternatural Flegm, for which purpose we commend the *Oxy-mel Scylliticum*; and for people of a rustick and strong constitution, you may give Extract of black Hellebor, or other Helleborated Medicines; Or *Aqua Benedicta Rulandi*, or *Vinum Benedictum*, but these strong things ought to be given only if the Disease approaches near to, or there be feares of Madnesse: but in the other cases, a strong Decoction or Posset of *Cardus* may be powerful enough. § 6. Catharticks in the cure of this Disease are of most singular use, and chiefly to be exhibited with openers: you may first give *Tinctura solutiva ab ʒj ad ʒij*, which may be given two or three several times, after exhibit *Tinctura Melanagoga Grulingij*; and then if the Disease is very stubborn give a strong Tincture of Sena, or *Elixir de Lapide Lazuli*, or the Pills of the same; Or extract of black Hellebor with *Pilula ex duobus*: Or the Panchymagoge Extract with *Mercurius dulcis*; all these things ought to be continued for some months, and given every other, or every third day alternately: giving continually in the intermediate days such things as strongly are

tenuate and open, that the humours being made thin and fluid, they may by the next purge be the better carried off. But because such as have this Disease are very hard to purge, and in some Bodies the strongest Medicines will scarcely operate at all: you must be obliged to give *Confectio Hamech* either alone, or mixt with Rosin of Jallap, and for change of Medicines sometimes *Diacatholicon*, sometimes *Benedicta Laxativa*, or *Elettuarium Lenitivum*; Sometimes the *Pilula aggregativæ*; and sometimes the *Tinctura Catholica Grulingij*, or *Cathartica Clostrei*; Or a Compound Tincture of Agarick, Rhubarb and Sena; for the intermediate openers there are no better things than *Tinctura Antimonij*, or Spirits of Sal Armoniack or Tartar, all which things do wonders. § 7. After due purging, you may put the sick into a Bath of warm water, which wonderfully resolves all stubborn and tenacious humors, openeth the Pores and causes a Transpiration; this Bathing is often to be repeated if the season will permit, and Galen de locis affect. lib.8. cap.6. saith, That he cured many Melancholy men only with the use of hot Baths, without any other Medicine: but lest often washing should hurt the Stomach, let the Sick anoint it with Oyl of Nutmegs, by expression before he enters the Bath; and when he comes forth let him do the same again, and then apply over it Cerate of Sanders or *Ceratum Stomachicum Galeni*, which strengthens and restores it very

much. § 8. The Body having been well purged and barbed, if it be in spring or summer you may give Whey for fifteen or twenty days, which will open the Obstructions of the Bowels: you may boyl and clarify it, and put to it every night *Epithymum* ℥ss. or sliced *Mechoacan* ℥iiii. this you must exhibit according to the strength of the Stomach, because it will easily pass through the Veins (being before-hand opened) and be sent forth by Stool and Urine, yet it may be given in large quantities: sometimes in stead of the *Epithymum* or *Mechoacan* you may mix with the Whey the juyces of Borrage, Bugloss, or Succory. § 9. The fourth and last Intention, is thoroughly to alter the whole habit of the Body, and to strengthen the weakened parts, which is wholly done by powerful specifics proper against this Disease. Among these are numbered Elixir Proprietatis; Conserve of Roses with Spirits of Sulphur or Vitriol: Sweet Oyls of Salt, Sulphur or Vitriol: Conserve of Borrage flowers p.iv. mixt with *Confectio Alkermes* p.j. to every Dose of which may be added *Ambergrise* gr.vij. Musk gr.iiij. Salts of Wormwood Tamarisk, and Scurvy-grass, Conserves of Wormwood and Elecampane: *Diambræ*, *Diamoschu dulcis*, *Leticificans Galeni*; *Confectio Alkermes* of Our prescription, juyce of Alkermes: *Ambergrise* alone given every day ad gr.vj. is a most admirable thing, for it cheers the Heart, revives the Spirits, and excites the natural heat; Bezoar stone given ad gr.x. in Rose-

Rose-water doth the same. Sharp Vitriolick and Mineral waters, are said to be beyond all other Medicines, for by correcting the Distemper of the Bowels, they powerfully open all Obstructions. Medicines also made of Steel have place here, because they open all Obstructions of the Liver and Spleen. In hot Bodies you may give Steel (prepared with Brimstone or Vinegar) with Conserve of Borrage and Succory; or in place thereof Syrup of Steel thus prepared. *R Fillings of Steel prepared with Vinegar ℥ij. Inward rinds of Tamarisk ℥ss. Cinnamon ℥ij. Ceterach M. ss. Wormwood and Agrimony water, A. ℥ss. Infuse six days in a warm place, strain, and add Sugar ℥ss. make a Syrup. Dose every Morning ℥ij or iij. The Tartar Pills of Schroder and Quercetan are of good use: so the Diatartarum of Fonseca, thus made: R powder of Sena, Salt of Tartar, A. ℥j. Cinnamon ℥ss. with Syrup of Limons q. s. make a Mass: Dose ℥ss. one hour before Supper. The Decoction of China is said to be an experienced thing: so also inspissate. juyce of Wormwood given alone or made into Pills with Extract of Ammoniacum. The juyce of Bugloss is also famous: and some say, That this Disease has been cured by taking every Morning for thirty or forty days, strong Wormwood Wine. But Riverius in Prax. lib. 12. cap. 5. saith, That Salt or Vitriol of Mars goes beyond all Medicines, because it opens Obstructions,*

strengthens the Bowels and qualifies their heat: see the *Sal Martis Riversj* in Our *Doron lib. 2. cap. 10. sect.* . which is accounted the best. § 10. In respect of Diet, be sure to keep the Belly always soluble, with something familiar, that the sick may not grow weary of it: Montanus prescribes Venice Turpentine to be swallowed three hours before dinner in the quantity of an Acorn, twice or thrice a Week, it loosens the Belly, warms and cleanses the Stomach, opens Obstructions, provokes Urine, and purges the Liver: and if the Sick cannot take often Purges, give every other day a Clyster, to draw forth some part of the humors: for if they go deep into the Bowels, they take away the greatest part of the filth from the Meseraicks; and a certain Noble man, long troubled with this Disease was cured by taking many Clysters, when all other Medicines failed. Let his ordinary drink be Infusion of Tamarisk, Agrimony, Burnet, Borrage, Bugloss, or Rosmary flowers in small Wines: or rather a Decoction of Sweet Bryar roots, because it opens and strengthens all the natural parts, Or which is yet better, Decoction or Infusion of *Lignum Nephriticum*, which opens all manner of Obstructions without any manifest alteration. § 11. For Topicks you may apply all those things to the Hypochondries which we prescribed in the Obstructions of the Liver and Spleen, and to the Stomach apply such things as mightily strengthen it: If there

is fits with any violent Symptoms Laudanum prudently given, doth Wonders. § 12. If the Hemorrhoids be stop't they ought to be provoked with sharp suppositories or by rubbing the Anus with fig leaves, or other things which may irritate the part, then apply two or three Horse fleeces, which repeat as you see occasion once a Month. If after the Leeches are fallen off, the Piles do yet bleed, as sometimes they will, stop them with well washt and dryed Lime, Spiders Webbs, or Thuraloes with the White of an Egg and Pledgets.

XIV. *Αἰδία ἐν νεφρῶν*, Calculus Renum, Dolor Nephriticus, Stone in the Reins.

§ 1. The cure respects either, the prevention, that it be not generated or increased: Or the taking away of the stone being generated.

§ 2. To prevent the generating of the stone, you must observe first, a proper Diet, wherein putrescive things and all Wines not fine are to be avoided; such things as provoke Urine, cleanse and dissolve are to be chosen, among which, *Asparagus* is an excellent thing, so also the Broth of Pease, Beans, and other pulse the fruit of *Eglantine*, & the stones of the same boyled in Broth, Chervil, Parsly, stone Parsly *Daucus* seed, Radishes, Turnep broth, Oyls of Olives and of sweet Almonds, Drink in which Horse Radish root, or Mustard-seed has been put: to which add leavened Bread. § 3. Secondly, if any matter be collected in the Reins, it must be timely emptied, that it may not concreate or harden; this

is done by giving Vomits twice a Month; or Lenitive Medicines, chiefly, *Cassia*, Turpentine, and such things as purge Water and Flegm: Or by giving things, which may break it as Decoction of *Lignum Nephriticum*; of Alehoof; juyce and water of Speedwell, with other things which we shall hereafter enumerate. § 4. Thirdly, If the Reins be any ways distempered or inflamed, you must cool them with Strawberry, Purslane, Lettice, and Barley waters, give cooling Ju-lebs sharpned with drops of Oyl of Sulphur or Vitriol; and anoint the Reins with cooling Unguents. § 5. *Hierbeto* of the Prevention: the taking away of the stone being generated, now comes to be considered; wherein you must first open, relax, and enlarge the passages, and make them slippery. This is done by giving emollient Clysters, as *Enema Emolliens Schroderi*, or *Enema Anodynum Mynsichti*: Or if the pain be very violent, *Enema in Calculo Renum & Vesicae*. Or this, R Oyl of Dill and Camomil, A. ℥ss. Oyl of sweet Almonds ʒij. Oyl of Rue ʒj. mix for a Clyster: In the mean time foment or embrocate with the Quintessence of Aniseeds mixt with Sack, by the help of a Sponge, after anoint with *Oleum Catellorum*; and apply to the Reins *Emplastrum Nephriticum*. Or you may anoint with this Liniment: R Oyl of Scorpions compound ʒss. Hensgrease, Oyl of Lillys, Oyl of Camomil, and of sweet Almonds, A. ʒij. make a Liniment to be used after the fomentation; then apply

ply a Cataplasme of Parietary made with Milk and Oyl of Scorpions; or of Parietary with Onions, &c. Inwardly by the Mouth, give Oyl of sweet Almonds (newly drawn) either alone or mixt with white Sugar or Sugar Candy, or rather with *Syrup. de Althæa*, ad ʒij . which let be repeated three or four times every day and if you mix with a little Oyl of Tartar *per deliquum*, every time, it will be so much the better: and one thing you are here to note, *viz.* That no strong Diuretick or Nephritick whatsoever, ought to be given without any Oily body, least by forcing too much, they should gather together a great quantity of matter, and so make the Obstructions greater then before: whereas on the contrary, being given with oleaginous things, the passages are made open and slippery, and the morbidick matter carried off, without any kind of hæsitacion as it were. If these things give no ease let the sick sit in a Bath made of an emollient Decocti-
 on. The former things prescribed being done for a while, you must afterwards exhibit every day Clysters of Simple Milk, or of Milk and Oyl of Almonds, twice or thrice a day, during the whole term of the Cure.
 § 6. You must next, as much as may be, evacuate the morbidick matter, which you may do by keeping the Belly soluble with *Diacassia*, or *Cassia* newly drawn; Or with *Venice Turpentine* made into a Bolus with white Sugar: Or with an Infusion of *Sena*, *Rhubarb*, and *Alkakengij* in S.V. Or

this; *R Cassia* newly drawn with Oyl of sweet Almonds ʒij . *Diaphe- nicon* ʒiiij . *Rhubarb* ʒij . powder of *Liquorice* ʒls . with *Venice Turpentine*, make a Bolus: but this observe; That you give no purging Medicines till the pain be in some measure allayed. The Seeds of Violets are very convenient, because they purge and expel the Stone, especially used in an Emulsion, see it in Our *Pharm. lib. 4. cap. 11. sect. 42*. It is commended by *Schroder*, *Hartman* and *Crato*: A Decocti-
 on or Extract of *Agarick* is of singular use in this Case, so also the *Tinctura Phlegmagoga Grulingij*.
 § 7. But if by reason of the pain, you fear to give a purge, yet you may at that time give a Vomit, by which the plenty of the morbidick matter and humors may be abated, and a revulsion made from the part affected; as *R warm water* ʒiv . Oyl Olive ʒij . Oxy-mel of squills ʒls . mix them: if you would have it stronger give *Sal Vitrioli* ʒ gr. xxx ad ʒij or more, giving it at three times, *viz.* ʒj the first time: then after the first Vomit give ʒls more; and after the second Vomit the remaining Portion. *Angelus Sala* saith, That he has often cured this Disease with *Mercurius Vita* alone, but it ought to be given to strong Bodies, and such as have not been emaciated by taking much Physick, or a long Course of the Disease.
 § 8. Now both before and after purging you must give things by the Mouth, which open the passages and abate the pain: for this purpose *Syrupus de Althæa Fernelij* often given is admirable

mirable, Or this of *Forestus* :
*R*ed Vetches \mathfrak{z} ij. Barley hulled
 \mathfrak{z} ij. Seeds of *Althæa* and Mallows,
A. \mathfrak{z} ss. the greater cold seeds, *A.* \mathfrak{z} j.
 Fat figgs *N*º. \mathfrak{x} . *Sebestens* *N*º. \mathfrak{x} .
 Liquorice scraped \mathfrak{z} vj. water \mathfrak{h} js.
 boyl till half is consumed, strain,
 and use it as an Apozeme. Or
 you may give Broths of Mallows,
Althæa and Gray Pease with
 much Butter and a little Salt.
 Or *Emulsio Amygdalarum dulci-*
um both Simple and Compound;
Emulsio ad Renum ardorem Hor-
stij, *ad Urinæ Acrimoniam*; Or
 that *ad Gonorrhæam Virulentam*
Horstij; letting his ordinary
 drink be this : *R* *Althæa* roots
 \mathfrak{z} ss. Barley *M. j.* juyce of Lique-
 rice \mathfrak{z} ij. Water \mathfrak{h} v. boyl and
 strain: but it will be much bet-
 ter if you mix with it equal
 parts of *Lignum Nephriticum*.
 But Oyl of sweet Almonds does
 mollify and relax the passages,
 ease the pain, and open and
 gently move, above all other
 things, being given *ad* \mathfrak{z} ij or iv.
 with white Wine, or a Decocti-
 on of Liquorice and Gray Pease:
 Or with *Syrupus de Althæa*: Or
 with equal parts of Oyl of bit-
 ter Almonds, Or with a little
 Oyl of Tartar *per deliquium*.
 § 9. For abating the pain, if it be
 vehement, and will not be eased by
 any of the former things, (because
 it creates great watchings and
 weakness) you must give Nareo-
 ticks, as *Philonum Romanum* \mathfrak{z} ij.
 or *Laudanum* gr. iv. in a Clyster:
 Or *Laudanum* gr. iv. Or *Syrup* of
 Poppies \mathfrak{z} j. mixt with Angelica
 and Poppy-water, *A.* \mathfrak{z} ss. by the
 Mouth; and truly Barbet saith,
 That he has done more by al-

tering and Narcotick Medicines
 (in this Disease) than by any o-
 ther. § 10. If after the use of all
 these things you find the pain still
 to continue, you may certainly con-
 clude that there are great Stones
 which stop the Uretors, which must
 be sent out by Diureticks, and such
 things as have a specifick force to
 break them. As for Diureticks,
 you must begin with the mildest
 first, least you inflame the Blood
 and Reins; and if it be a full
 Body, you may give things which
 are more piercing and attenuat-
 ing; but this observe in giving
 of all Diureticks, that you give
 them with an oleaginous body,
 which may open and make slip-
 pery as well as force. § 11. The
 Principal Lithonriptricks or speci-
 ficks for breaking and expelling the
 Stone, are these following: Roots
 of Grasse, Garlick, Onions, Leeks,
 Orrice, Erringo, Liquorice, As-
 paragus, Rest Harrow, Parsly,
 Fennel, Dropwort, *Althæa*:
 leaves of Mallows, Maiden hair,
 Germander, ground Ivy, Lo-
 vage, Cresses, Saxifrage, Persi-
 cary, Savin Golden Rod, Schœ-
 nanth; Flowers of Elder, Hype-
 ricon, Hops, Saffron; The seeds
 of Poppy, Grumwel, Annise, Fen-
 nel, Carots, Carraways, Cummin,
 Barley, Violets, the four greater
 cold seeds: Fruits, Winter Cher-
 ries, Bay-berries, Juniper-ber-
 ries, Strawberries, Figgs: Woods
 of the Hazle, Sassafras, Guaja-
 cum, *Lignum Nephriticum*
 (which is a famous thing:)
 Barks, Cinnamon, Cassia Lignea:
 Gums, Turpentine, Venice and
 of Chio, *Balsamum Verum*, of To-
 lu, and of Peru, Balsam of Sul-
 phur

phur Anifated, or with Oyl of Juniper : Whey, the Tooth of a Bezoar, Earthworms, Tartar, and all the Medicines made and compounded of it : Tartar Vitriolate, prepared Crabs Eyes, Mandible of a Pike prepared, Jews stone, *Lapn Prunella*, Crystals prepared and their Essence; *Lapn Nephriticus* ; Spirit of Salt common and dulcified, rectified Spirits and Oyls of Vitriol, Sulphur, and Tartar ; Tincture of Antimony, Spirit of Sal Armoniac and of Niter dulcified ; *Tinctura Juniperi Mynsichti*, Syrup of *Althæa*, of white and corn Poppies, *Byzantinus*, *Diacodium* ; Oyls of Annis, Amber, and Turpentine : Salts of Amber, Ash, and of Bean-stalks ; Egg-shells and Oyster-shells calcined, *Tragea Antinephritica Queretani*, *Aqua Vitæ* of Juniper : Conserve of the Nephritick stone, *Sal Nephriticum*, *Liquor Nephriticus*, & *Nephriticus Mynsichti*, *Liquor Tartareus Mynsichti* ; *Unzerus* his generous Wine (in which a sharp biting Radish, the skin scraped off, was sliced and steeped a whole day) given with the Magistery of Crabs Eyes and Sp. of Salt. *Labavius* his white Saxifrage water with Sugar of Violets and Roses streined with a little Spirit of Vitriol : *Vinum Antinephriticum Mynsichti*, *Juniperinum Mynsichti*, *Elixir Nephriticum Nost.* *Juniperinum Gregorij Horstij*, *Nephriticum Schroderi* : *Tinct. in Calculo Horst.* *Nephritica Horst.* *Juniperi Mynsic.* *Nephritica nost.* *Rob Juniperinum*, *Species Lithanetib.* *Nicholai*, *Pulvis contra Calculum*, *Species Nephritica*

Mynsichti, Oyl of Juniper-berries, Pouder of Sows or Hog-llice. Essence or Extract of Alkakengy, with Crabs Eyes and Crystals of Tartar : Infusion or Decoction of the Nephritick-wood, given for seven days together ; juyce of Radishes, *Diacassia* mixt with Turpentine, *Aqua Comminuens Calculum*, *Diuretica Clossæi*, *Spiritus Lithontripcticus*, *Spiritus Nephriticus*. Juyce of Parietary ʒij . mixt with juyce of Limons and Oyl of sweet Almonds, is accounted a good thing : so also juyce of white Wine, and Limons, A. ʒij . sweetned with Sugar Candy ʒss . but this note, That juyce of Limons often used, exulcerate the Stomach, whence comes the flux *Lienteria*. *Riverius* saith, That Egg-shells calcined, given ʒss ad ʒj in white Wine, doth powerfully expel the stone sticking in the passages of the Ureters. Wine of Winter Cherries is of good use. Turpentine may be often used, *Amatus Lusitanus*, Cent. 2. *Obser.* 68. saith, That a Monk troubled both with Gout and Stone, was cured within six Months of both, only by the use of Turpentine, after many other things were used in vain. *R Venice Turpentine* wash in Saxifrage water ʒss . with Sugar make a Bolus. Or *R Cassia* new drawn ʒvj . Turpentine ʒiv . Pouder of Liquorice ʒij . mix them. Or *R Turpentine* ʒss . *Rhubarb* Poudered ʒj . mix them. Or *R Turpentine* ʒiv . *Lithontribon* ʒij . mix them. Goats Blood is commended by all Authors both Antient and Modern to dissolve the

the Stone. The Tincture of the Nephritick Stone is also very good, thus prepared by *Marbuis*. R^r Powder of *Lapis Nephriticus* q. v. rectified Spirit of Salt enough to cover it two fingers breadth, digest till the Tincture is green. Water distilled from Goats-Blood in a Glas B. M. doth wonders. But in all manner of suppressions of Urine *Parbet* saith, That Eggshells calcined and taken exceeds all other Medicines. *Hartman* commends the Urine of a Goat, taken out with his Bladder while he is yet alive and so drunk, applying the Guts and Paunch to the Belly and Privities, by this saith he, The stone will be presently consumed without hurt to the Vessels, and the sick cured. *Zacutus Lusitanus* *Prax. lib. 2. obs. 58.* highly extols natural Balsam for expelling Stones, and that one sixty years of Age, whose Water was stopt eighteen days with stones, was cured thereby: first he took some drops of it with Oyl of sweet Almonds, increasing the quantity of both till he came to half an ounce of Balsam, and three ounces of the Oyl of Almonds; within ten days he voided six stones. The same *Zacutus* doth commend Tobacco water distilled from green Tobacco, by which he took away great Stones fastned in the hollow of the Reins. Infusion of Millepedes in white Wine taken a long time is good for the same. So also *Lithontriskon Millepedum* (which see in *Our Doron lib. 2. cap. 21. sect.*) or this preparation of *Riverius*.

R^r live Sows *libij.* wash in R^r barrow water, drown them in Spanish Wine; put them into several Glasses, which stop; dry them in an Oven when the Bread is out, till they will Powder: Powder them, and put so much Spanish Wine upon it, as it will suck in, dry it again, do so thrice, then sprinkle with Strawberry water sharpened with Spirit or Oyl of Vitriol, dry again and keep it for use. Here is also commended the Conserve of Hips, of Mallows, of *Althæa*, the Inspissate juyce of Purslane given in the Pills \mathfrak{zj} at a time, which does powerfully cleanse the Reins. Pains of the Reins and Back even of long standing are wonderfully cured by eating of Filberts, with their inward husks, so as they never return any more. Spirit and Oyl of Salt is highly commended, so also dulcified with S. V. The Ashes of a Scorpion given ad \mathfrak{zj} at a time in Grass or Pellitory water or white Wine is said to be good; but *Mathiolus* his Oyl of Scorpions taken ad \mathfrak{zj} in the aforesaid Liquors, is more powerful, and excellently helps the Voiding of the Stone. Among Salts the best is Salt of Beans, stalks or Cods ad \mathfrak{zls} in White Wine, or Tarrar Vitriolate in the same Proportion: Savin-water, but above all *Perficary* water given ab \mathfrak{zij} ad \mathfrak{ziv} . performs this cure to a Miracle. § 12. Among singular Compounds we have these: The Urinary Laudanum of Michael: R^r juyce of Liquorice dissolved in Winter-Cherry-water \mathfrak{zjls} , Camphir \mathfrak{zj} . Saffron \mathfrak{ziv} , Winter cherries \mathfrak{zls} .

Tragacanth, Mastich, A. ʒjss. Laudanum ʒij. mix them. It has a peculiar quality to open Obstructions of the Reins, provoking Urine and driving out the Stone. The Nephritick Liquor of Michael: R Lynx-stone, Jews-stone, Sponge, Nephritick stone, Ice of Paradise, Crabs-Eyes, Ana: dissolve in Spirit of Salt rectified, strain the solutions, and distil them to dryness, the Caput Mortuum is a coagulated Nephritick Liquor. Another Nephritick Liquor: R Strawberry and Saxifrage waters, A. ʒij. White or Rhenish Wine ʒvj. Oyl of sweet Almonds ʒij. Spirit of Vitriol ʒj. mix for three Doses: give the first very hot: the second after six hours: and if this will not do (as it seldom misses) then give the third. Rolfinkius his Lithontriptrick Powder: R Crabs Eyes prepared, Goats Blood prepared, A. ʒjss. Jews stone, Nephritick stone, A. ʒj. Pikes Eyes, Millet seed, A. ʒij. Crystals of Tartar ʒss. of Salt ʒj. mix and make a Powder. Infusion of Horse Radish. R Horse Radish scraped ʒij. White Wine ʒiv. Infuse ten or twelve hours, then strain strongly, which repeat twice or thice. Spiritus Acetosus Mineralis. R Tartar Vitriolate ʒj. Zulep of Roses ʒbj. Cinnamon water ʒiv. mix, Dose ʒij. Another Nephritick Liquor: R Tartar Vitriolate ʒss. Radish water ʒlss. juce of Limons ʒij. Syrup of Carn Poppies, of Althea, A. ʒj. Crabs-Eyes ʒij. mix, Dose ʒij. Another: R Barks of the Roots of Carduus Affininus ʒj. Liquorice ʒij. Persicary water q. s. boyl to ʒvj. strain and take it

many days. Distilled water of Onions: R white Onions shred ʒbiv. Sugar ʒbj. White or Rhenish Wine ʒjss. distil in B.M. to dryness, Dose every Morning ʒiij for many days: but the Infusion of shred Onions in White or Rhenish Wine is of great force; so also the juyce given to ʒj or ʒjss. at a time, it gives immediate relief. A Nephritick mixture: R Quintessence of Juniper-berries ʒiv. Ens Veneris ʒss. mix and give almost a spoonful at a time mixt with Sack: if the pain be very violent dissolve in it a proportionable quantity of Laudanum, or of our Confectio Anodyna. In a hot Cause and Constitution. Barbet prescribes this: R roots of Althea ʒj. Liquorice ʒij. Mal-lows M. Melon seeds ʒss. boyl in Barly water q. s. strain and to ʒbj thereof add Syrup of Poppies ʒij. Crabs Eyes ʒj. mix and give ʒvj three or four times a day. In a cold cause and Constitution the Nephritick Spirit of Barbet. R roots of Rest-harrow, white Saxifrage, A. ʒj. Liquorice ʒss. Goats Blood ʒvj. Crabs Eyes bruised, Nutmegs, Cinamon, A. ʒj. Saffron ʒiij. Cloves ʒij. Strasburgh Turpentine ʒxvj. Spirit of Malmsy Wine ʒbv. cut; bruise, and digest fourteen days, then distil in B. M. Dose one or two spoonfuls fasting two or three times a day alone or in Parsly or Persicary water. Spirit of Sal Armoniack mixt with Rhenish Wine is a specifick both to prevent and cure the Stone: so also Niter and Sal Gem calcined, and dissolved per deliquium into Oyl; as also the Spirit of Juniper-berries

put

put upon Rob of Juniper and Elder, and made of a Red Colour by Digestion, pleasant to behold, and in tast much like Malmsey Wine. To these add the Elixir and Essence of Juniper approved of to a Miracle mentioned in Our Pharm. lib. I. cap. 6. sect. 51. § 6, and 7.

XV. *Λιθιάζον της κύστεως*, Calculus Vesicæ, Stone in the Bladder.

§ 1. The Cure of this Disease is the same with the former: there ought to be an evacuation of the antecedent matter, Revision, and binding the Breeding of it: the matter conjunct and the Stone it self ought to be dissolved or broken and taken away. § 2. To perform all these the Medicines mentioned in the former section may serve: but for Evacuation, you may do well often to purge with Diacassia mixt with Turpentine, which seems to be a specifick, and has alone cured several. § 3. For Revulsion if the pain be violent, a Vomit has been seen to be of admirable effects: you may make it of Sal Vitrioli: But Oyl of Turpentine is said to be a specifick in this Case, if rightly given; and it Vomits with no very great pain. § 4. For the breaking and dissolving the Stone, although we commend the things mentioned in the former Section, yet these things following are specially famous. Liquor Lithontripicus Magnus. R Parsly water ℥ij. pure Salt of Tartar ʒj. the yellow part of fresh Orange peels ʒss. infuse six hours, strain, and afterwards filter through brown Paper. Laurembergius com-

mends the Pouder of *Palme worms*. Riverius saith, The aforementioned distilled water of Onions is most excellent by which (being continued twenty days) he saw a stone bigger than a Bean cast out of the Bladder. The excellency of this we can in particular attest to; as also to the Infusion of Onions in white Wine, but more especially to their juyce, being taken a spoonful at a time in White or Rhenish Wine, the juyce of River Crabs in Rhenish Wine has cured many. This following cured one that was to be cut of the the Stone: R Pouder of Sows or Hog lice ʒj or ʒiv. Aqua Vitæ ʒss. Red pease broth ʒx. mix and take it early in the Morning fasting, and fast five hours after it. Some instead of the Pease Broth use Bean and Strawberry water, A. ʒv. with Oyl of Vitriol, gur. viij. The following is said to dissolve the stone. R prepared Sows ʒij. Hares and Goats Blood prepared, mild Roseflowers, Violet seeds, A. ʒj. Species Lithontribi ʒj. mix them: of this mixture R ʒij. Spirit of Juniper ʒj. Diuretick Decoction ʒx. mix and take it in the Morning fasting, it brings away the Stone like Scales of Fishes, but it ought to be taken for near a year and half together, if the Stone be very great. The Blood of a Goat (fed with Herbs which break the Stone) distilled, with an Essence of Goats Kidneys are said to be of great force: so also Lithontripicon Millepedum (after the taking of a mollifying Clyster) with a moist Diet to avoid the Obstruc-

tion,

tion, abstaining from Wine and all hot things; And *Lapis Prunella* in *Aqua Papaveris*; with this *Hartman* saith, He has resolved stones bigger than an Egg. To these add the Urine of a Goat newly killed; likewise Liquor of Crystal which is wonderful in this Case, given à gut. x. ad xvj. § 5. For mitigation of the pain, a Bath of water is good, after which you must anoint the Cods, Pubis and Perinæum, with Oyl of Scorpions Compound, Oyl of bitter Almonds, fat of a Cony, and Hen, A. ʒjss. Juycce of Parietary ʒss. mix all together. § 6. If all these things fail, and no remedy seems to be left, the sick must be Cut, by which means many have been cured: the way of doing of which we have taught in cap. 16. sect. 7, 8, 9, and 10. foregoing.

XVI. Διαβήτης, Diabetes, Unmeasurable Passing.

§ 1. In order to the Cure of this Disease (if it may be) you must cool and stay the motions of the Blood and Humors, by exhibiting a cooling and emollient Clyster; and then giving a gentle cooling Purge, made of Cassia and pulp of Tamarinds; Or a Decoction of Plantane, Lettice, Purslane, Tamarinds and Myrobalans with Syrup of Roses. § 2. After a sufficient evacuation; make a Resolution by Emetics as *Sal Vitrioli*, Decoction of *Radiſh* seed and Dwarf Elder with Ozymel, which does draw back from the Ureters. § 3. The next thing is to correct the Distemper of the parts, by things cooling, drying and astringent; for this purpose we

commend the Essence of Crocus Martis, Tincture and Salt of Corals: but that which is thought to exceed all is Tincture and Essence of Emeralds; *Saccharum Saturni* dissolved in Water to Bath the Back withal, is profitable: let a drying Diet be ordered and the sick drink of Chalybeate water or Chalybeate Milk. Juleps made of the Waters or Decoction of Plantane, Shephards Purſe, Purslane, Lettice, with Syrups of Myrtles, Quinces, or Syrup of Poppies adding Troches of *Terra Sigillata* cool and thicken the humours: then give this astringent Decoction, R. Comfrey and Plantane roots, A. ʒj. unripe Bramble-berries ʒij. Plantane leaves, Balaustians, yellow Myrobalans, Purslane and Poppy seed, A. ʒj. Red Roses P. j. Red Wine q. s. boyl to a pint and half: strain, and sweeten with Syrup of Quinces or Myrtles ʒv. give it at four times. Or this Powder: R. prepared Coral and Pearl, fine Bole, *Terra sigillata*, Tormentil roots, Coriander seeds, Nutmegs, A. ʒj. make a fine Powder, which give with Sugar or made into a Bolus with old Conserve of Roses. *Erasmus* much praises Syrup of Comfrey roots and Sloes, which he often used with good success. § 4. If these things do nothing, you must use sudorificks which powerfully send forth the serous humours by the Pores of the skin; these things must be made of China, Sarsa, Treacle, &c. which you may sharpen with Oyl or Spirit of Vitriol to quench thirst, stay the flux, and resist malignity: moreover you

you may provoke Sweat by outward means, as Baths, or sitting in Hartmans Chair, with the Vapors of Spirit of Wine, &c.

§ 5. If all these things prevail not, you must use Narcoticks which presently cool, thicken, and stay the motions of all humours, the chief of these things are Syrups of Poppies, Laudanum Solid and Liquid, Confectio Anodyna, Essence of Hen-bane, and Hen-bane seeds.

§ 6. For Topicks, anoint the Back and Loyns with Unguentum Rosatum, Santalinum & Comitisse mixed together.

§ 7. Lastly, to allay and remove the Symptoms, as Watching, Languishing, and extream Thirst, you must have respect to their respective places, where they are particularly treated of: but for the last of them, viz. extream Thirst, you may give a Decoction of Sloes and the inward Bark of the Oaks; by which thing alone Erastus saith, He cured this Disease in a Boy: And we once did it in a Girl of fourteen years of Age, by a Simple Decoction of unripe Bramble-berries.

XVII. Δυσουρία, Dysuria, Urinæ Difficultas, Difficulty of Pissing, or Scalding of the Urine.

§ 1. You are to consider the Cure according to the Cause; and therefore if it comes from an Inflammation, or an Ulcer, or the Stone, they are to be remedied as we in their proper places have taught. § 2. If it comes from sharpness of Urine mixed with hot humours, you must correct the distemper of the Liver and other

parts, and evacuate the matter: we have taught in the Cure of the Stone, which ought to be followed with Essence of Turpentine 3j. mixt with Syrup of Citron and Parsly water. A Bolus of Cassia alone is said to be the best Purge, but Cassia mixt with Turpentine is better, & it is best if it be mixt with pulp of Tamarinds: Or you may mix it with Decoct. of Purslane, Lettice and Mal-low tops, and so give it many days together, that thereby a Revulsion may be made by Stool: if you would have the Purge stronger you may add Infusion of Sena, Rhubarb, and Syrup of Roses, and, if the pain be long and violent, put in also some Mercurius dulcis. § 3. If these things do no good, you must give Emeticks, and so make a Revulsion by Vomit, which may be done once or twice a Week to such as easily Vomit: to strong Bodys you may give Antimonials: to weaker Salt of Virriol, Oxymel of Squills, and such like. § 4. The Vomiting being over, the remainder of the sharp humours are to be attracted and drawn down by Clysters often iterated; which may be with Enema Carminativum Mynsichti, or Enema Anodynum Mynsichti: Clysters of Milk only are excellent in this Case, and by long continuance have cured the Disease alone. § 5. Revulsion being made, you must alter with things opposite to the Disease. R Purslane or Lettice water, Poppy water, A 3ij. Syrup of Violets 3j. Syrup of Poppies 3ss. Sal Prunella 3j. mix, and repeat it often. Or this, R White Poppy seed, and

and the 4 greater cold seeds, blanched Almonds, ℥ss . make an Emulsion in Barley broth boyled with a little Liquorice ℥jss . add Syrup of Violets ℥ij . of Poppies ℥j . *Lap. prunellæ* ℥iij . mix for 3 Doses. If the stoppage and pain be great you may add also Syrup. de *Althæa* All Whey, but especially that of Goats Milk is exceeding good, being drunk very largely; but if there be no Feaver, Milk will be yet better, because it does cleanse, ease pain, and quallify the sharpness of the humours.

§ 6. If the Disease be inveterate give cooling Mineral Waters, chiefly those of Alum, Iron, and Vitriol; Or Simple Decoction of Mallows with Syrup of Violets: Or a Decoction of Juniper-berries well bruised: Or Bean flower, or Bean-cod water ℥vj . given mixed with Syrup of Liquorice or Poppies before Meat, or Troches of Winter Cherries given ad ℥j in Persicary water.

§ 7. If a white and milky matter comes forth in great abundance, it is commonly cured (universals premised) by the use of Hypocris, Canary or Mallagor Wine.

§ 8. If it be from things External, as Cantharides, then Milk is good: if from Poyson, you must mix Alexipharmicks.

§ 9. If the stoppage of the Urine be very great give Species Nephriticæ, Tinctura Nephriticæ, Elixir Nephriticum, Or the juyce of one River Crab (being beaten, prest and strained) mixt with white Wine; after exhibit Syrupus Succorum in Aqua Papaveris.

§ 10. For Topicks to mitigate the Pain, Milk is commended; cast in

with a Catheter; Or by dipping the Privities in a Vessel of Milk, and applying a Cataplasim of Parsietary with Oyl of Scorpions. Or you may Inject an Emulsion of the cold seeds, or Plantane-water or Whey: Or ℥j of Trochiscæ Alkakengi dissolved in Poppy water. Fomentations of cool herbs are good, so also Baths, and Unctions of Oyls of Roses, of Water Lillys, and Unguentum Refrigerans Galeni, Populeon, &c. and if it be a Man, and the pain is violent, put the yard in tithe of pissing into warm Milk, or warm Water; or a Decoction of Poppy seeds.

§ 11. Observation; Sennertus saith, That one who was some Weeks troubled hitherwith, and pissed half an Urinal full of white matter every time; was cured only by drinking of Sack. Amatus Lusitanus Cent. 8. Obs. 58. saith, A Woman was cured (when all things failed) by taking every Morning and Evening ℥j of Conserve of Mallow Flowers, and drinking after it ℥iij . of Mallow water. Forestus lib. 25. Obs. 4. saith, That he cured a greivous Dysury oftentimes with a Simple Decoction of Mallows mixt with Syrup of Violets, and that there is nothing like it. He also saith, That he cured an Old man of Delf, with Camomil Flowers boyled in Milk. And we have cured many of a violent Dysury in a few hours, only with the Juyce, or a strong Decoction of Camomil: so also with the Quintessence of Juniper berries ℥iv . mixt with ℥ss of Ens Veneris.

XVIII. *Stratygia*, Strati-
guria;

guria, Urine Stillicidum, *Passing by Drops.*

§ 1. In the Cure hereof you must remove the causes; first, empty by Cassia and Turpentine: Or Cassia mixt with Turpentine and Rhu-barb. § 2. Temper the heat of the Urine and the parts with coolers and moistners, and with such things as are slippery, such are Lettice, Purslane, Mallows, Marsh-Mallows, Oyl of sweet and bitter Almonds, &c. § 3. Provoke the Urine with Salts of Acorns and of Bean stalks, A. Jls. Oyl of Wax gut. iij. given in Decoction of Red Vetches or Infusion of sliced Onions in white Wine ℥viij. Or you may give of the mixture of Salt of Tartar in Parsley water, Or of this, R. Oyl of sweet Almonds ℥iij. Oleum Tartari per deliquium ℥ij. mix and give it with the Infusion of an Onion in white Wine: the Sick may also drink largely Mallago Wine. § 4. If it proceeds from matter sent from the Liver, Kidneys or other parts, give Whey largely sweetned with Sugar of Roses. § 5. If it be simple and without pain, from the refrigeration of the Bladder and its Sphincter, you must give Diagalanga, Mithridate, Venice Treacle, &c. Outwardly, anoint with Oyl of Rue: Or besmear upon the Navel Goatsgrease: Or Oyl of Juniper-berries. § 6. If it proceeds from the Stone, or an Inflammation of the Bladder: Or affects of the Neighbouring parts, Inflammation of the Intestinum Rectum and the Womb, &c. You must cure it, by curing those Diseases. The remaining part of the Cure (if the things aforementioned do

nothing) you may search out in following Section, for as much as Stranguria and Ischuria differ only in degrees: the former being only a stoppage of Urine in part; the latter a total suppression thereof.

XIX. *Ixveia*, Ischuria, Urinæ Suppressio, Total stoppage of Urine.

§ 1. The Cure hereof respects either the Symptom it self: Or the Causes thereof. § 2. In respect of the Symptom, it is required that Urine be provoked, by a pressing up of the Belly, with holding of the Breath: by putting up a Catheter into the Bladder, unless the Inflammation hinder, Or of a Wax candle anointed with Oyl of Roses: by Suppositories and Sharp Clysters, made of Milk, Honey, Oyl and Tincture of Colocynthis: because of the Communion of the Intestinum Rectum with the Bladder; by Fomentations of the Pubes and Perinaeum with Decoction of Parietary and Camomil: by applying Cataplasms of Horle-Radishes bruised and fried with Butter: by giving inwardly, first Purgatives, as Diacassia with Turpentine, or Syrupus de Spina Cervina: Secondly, Diureticks, as the juyce of Cray-fish, baked and strained through Hair-Cloth, and given in White or Rhenish Wine: Decoction of Buckthorn in Wine: of Gilly-flowers, with their roots dyed, in Wine of Quinces. Specificks here are Earth-Worms in number five, Drunk with Sweet Wine: An Egg-shel purged, from which a Chicken has been hatched: Goats piss drunk warm, the

the Guts and Caut being applied to the Belly. § 3. In respect of the Causes, It is either Spurious, coming from Diseases of the Reins or Ureters, and then you must cure them. The pain, Inflammations or Stone of Kidneys: or if it comes from a fullness of the emulgent Veins, you must cure it with Medicines purging Water. § 4. Or it is exquisite and true, proceeding from causes essential in the part, as first, Inflammation of the Bladder or parts adjoining, and then it is to be cured as we teach in an Inflammation of the Bladder at Sect. LIII. following. § 5. If it be caused by a Stone in the Neck of the Bladder, you must lay the sick on his Back, with his Thighs very high, and shake him soundly: Or make him stand on his Head, that the stone may fall into the Bladder: if this will not do, you must thrust it back with the Catheter: if the Stone be in the passage of the Yard, you must get it out by gently stroking of it with your fingers, putting the sick in the mean season into a Bath of warm water: if this will not do, you must bind the yard on both Sides of it, and take the Stone out by Incision. § 6. If it comes from Obstruction of the Neck of the Bladder by reason of Inflammation, you must cure it, as you cure an Inflammation: but in the mean season, you may make way for the Urine with a Wax Candle dipt in Oyl of Roses, avoiding the Catheter, least it increase the Inflammation. § 7. If it comes from a Caruncle in the urinary passage, cure it as you

are advised in cap. 17. sect. 16. foregoing: and as we shall farther advise in sect. LXI. following: wherein you must be constrained to use the Catheter, or some such like Instrument after Revulsion by Vomiting: and Repellers applied to the Part to take away the Inflammation. See cap. 26. sect. 31. § 6, 7, 8. foregoing, where you may receive much satisfaction. § 8. If it comes from thick Flegm or matter, (which is the most common and ordinary Cause,) you must first evacuate and purge Flegm, making a Revulsion, first with proper Clysters made flat, and reiterated; among which Enema Emollient Schrodéri is chief: if it be not strong enough, you may add Aqua Benedicta Rulandi ad 3j. ad iij. or Tincture of Colocynthis a ʒij. ad 3j. Or you may adhibit Enema Hydragogum either Simple or with the same additions: and some have found the Suppositoria Carminativa Mynsichti, often put up, to be of admirable use. § 9. For Emetics Sal Triolij given ad ʒij. or ʒijss. at three times within a quarter of an hour one of another, or immediately after the preceding Vomit, is of singular use; and brings forth Flegm to a Miracle: this you may repeat three times every third or fourth day: for very strong persons and Rusticks you may give Vinum Benedictum, or Aqua Benedicta Rulandi Mercurius Vita, or other Antimoniall. § 10. Afterwards you may use Catharticks, that a perfect and effectual Revulsion may be made: for which purpose are given a Bolus of

Diaphœnicon and Rhubarb, or those mixt with Turpentine : Or Diacarthamum with Turpentine: and if the Body be strong you may give Carycostinum with Venice Turpentine : giving often after the same Turpentine made into a Bolus with Pouder of Liquorice. Or this, R^x *Benedicta Laxativa* ℥ss. Troches of Myrrh ℥ij. Decoction of Savin ℥iij. mix for a Potion, by this, saith *Riverius* a Woman was perfectly Cured : to these add *Tinctura Cathartica Cloffei*, *Catholica Grulingij*, *Phlegmagoga* & *Hydragoga Grulingij*, with many other things of like nature. § II. After purging you ought to continue the giving opening things for many days, as Decoctum aperitivum, majus & minus & cum Rhabbarbo, or with Oxymel simple and Scyllitick, using in the meanwhile emollient and opening Clysters, Fomentations and Baths, with all such things as are proper for dissolving and expelling the Stone. § 12. If the Body has Flegm in great abundance you ought to give Phlegmagogues for many days, or a purging Apozeme of the same nature, with cleansers and cutters, such as we describe in the Cure of the Ulcers of the Reins and Bladder at Sect. LII and LIV. following. § 13. These things being done, you must apply your self to peculiar Diureticks, and such things as have been found Specificks in the Cure of this Disease. Clarified juyce of Parietary taken to ℥iv. in a Morning fasting, being sweetened with Syrup of Althea is admirable, but much better, if you mix therewith Sal prunella or Spirit

of Salt. So also Salt of Tartar and of Bean stalks given ab ℥is ad ℥j. dissolved in Parsley water or in the Infusion of Onions in Rhenish Wine, to every Dose of which you may put ℥ij or iij of Oyl of Sweet Almonds : Hog-Lice beaten with White or Rhenish Wine, and drunk, do the same thing : so also the Infusion of bruised Mustard Seed in Rhenish Wine. Oyl of Scorpions of *Mathiolus* given à gut. v. ad viij. in Broth or juyce of Parietary doth powerfully provoke Urine: So the juyce of Onions ad ℥j mixt with ℥is of Sal Prunella : Or Decoction or juyce of Camomil which are miraculous : to which add Persicary water : if you fear Inflammation you must often use Sal Prunella, because it so admirably cools : but some are of Opinion that Spirit of Salt doth it better. Sal Prunella, in Goats Whey ℥viij. is an experiment worth the knowing, especially if it be taken seven or 8 times. The juyce of the Sea-Crab in Rhenish Wine is beyond compare : and some have been presently cured by drinking a Pint of Castile Soap Suds, a Medicine somewhat unpleasant. § 14. If these Obstructions of Flegm or Matter do often return, the sick must often use Sulphur and Niter Bath Waters, which dissolve, cleanse and consume that slimy matter both by Bathing and Drinking. § 15. If the pain be very great, you must apply a Cataplasm of Parietary fried in Oyl of Camomil or Oyl of Elder, or of Scorpions : Or a Bladder half full of Oyl, with Cantharides boyled therein : Or a

Cata-

Cataplasim of fryed Onions with Oyl of Dill or Elder, or of Eggs. But a Raw, White Onion beaten with Oyl of Scorpions into a Pultise and applied to the Reins, Ureters, and Privities is much better. So also a Cataplasim of beaten Radishes with *Saccharum Saturni* and Camphir. A Cataplasim of Cow Turds, as *Arius* saith, does wonders. and by the Privy parts, you ought to inject *Trochisci albi Rhasis* with *Opium*, dissolved in Poppy-water, or *Trochisci Alkakengi*, or *de Camphora*, so dissolved. § 16. *Observations.* *Dodonæus* saith, That one eighty years of Age, was cured of this Disease by a *Lixivium* or Lye of Ashes of Eggshells in Rhenish Wine. *Arnoldus de Villa Nova* saith, That a Cardinal who had not pissed in four days, and was desperately swoln, was cured with Winter Cherry Wine: A Poor and Ordinary Physician did it, and by this only experiment he became a Great and Rich man. This Wine was made by taking seven, nine, or more Winter Cherries, beating them with choise White Wine and straining them. We cured several people with a strong Decoction of Juniper-berries, extreamly well bruised, drunk a quart a day for some days. An Apothecary of *Paris* was Cured with this: *Rx white Canary* ℥iv. *juyce of Limons* ℥j. *Spirit of Turpentine* ℥ij. mix for a Potion;

XX. *Πονόρροια*, Gonorrhœa, The Running of the Reins so called.

§ 1. If it be virulent or malig-

nant, such as is contracted in the French Pox, it must be cured first by general evacuations with such things as are proper against the fourth Disease, as *Pilulæ Rudij* mixt with *Mercurius dulcis*, given for many days: Or with *Pilulæ ex duobus* mixt with Turbith Mineral: Or *Pilulæ Aggregativæ* mixt with Turpentine; and it would be good, if the Flux would be stayed and the Ulcer healed by purging alone: however if this be not, you must be cautious of purging too much, but rather purge by degrees, least by too much and long purging, you create an incurable Gleet. § 2. The Body being well purged and cleansed, the sick ought to have a Diet of *Guajacum* and *Sarsa* for twenty or thirty days; in the mean season taking Turpentine ℥vj. dissolved with the yolk of an Egg and mixt with Plantane or Poppy water every Morning fasting. § 3. The pain is to be eased with an injection made of *Trochisci albi Rhasis* dissolved in Plantane water, and injected with a Syringe: the Ulcer being well cleansed, you may mix therewith *Saccharum Saturni*, and inject three, four, or five times a day, so will the Ulcer be quickly healed; and while it is upon healing it will be hastned, if towards the end thereof, you put into your injection a little S.V. for that conglutinates and strengthens wonderfully. But we have a peculiar injection of Our own, which cures this Disease (universalls premised) in six, or eight days time, and is so

Bbb 3 be

be recent in three or four days at most, and sometimes in two days.

§ 4. If the Gonorrhœa be not virulent, you may first cleanse with Diacassia mixt with Turpentine; then rake for some days Tincture of Gum Guaiaci ʒss. in clarified Whey; afterwards make use of the former injection, or of Our secret, giving inwardly in the mean while Essence of Turpentine ʒj. given in Syrup of Agrimony; Saccharum Saturni in Poppy water, Gelly of Iling-Glass: Powder of the Bone of the Fish Sepia a gr. viii. ad ʒj. in old Conserve of Roses: fixt Antimony in Plantane water: Tincture of Corals, Diacodium; but most excellent is Our Confectio Anodyna with Crocus Martis Astringens, or fine Bole; Or our Laudanum dissolved and given in Sack. But a Bolus of Venice Turpentine ad ʒss given every Morning in a Wafer for ten or twelve days together has cured many, especially if they use a proper injection; so also the Powder of Turpentine (made by boiling of it) given with Milk for fifteen days does the same. Riverius saith, He cured divers Gonorrhœas with Conserve of Bruic of Bruscus given ʒss for some days together.

XXI. Εμμηνοῦ ὀγκος, Menses suppressio, stoppage of the Terms.

§ 1. This cure is performed first by repelling of the Blood from its preposterous motion, when it is sent forth by the Nose, Vomiting, Spitting, Hemorrhoids, &c. or suffocates, obstructs, or disbands other parts: this Repulsion is done by

washing the parts to Bleeding with cold water, avoiding loud speaking: then make Revulsion by applying Cupping-Glasses to the Thighs and Calves of the Leggs; sometimes dry, and sometimes with Scarrification: by provoking the Hemorrhoides if stopt: by Frictions and Ligatures: by Fomentations and Emollient Baths, Oynments, Pessaries, and Clysters for the Womb. § 2. If the Blood, being diverted from the Womb, flows by the Hemorrhoids, it is very difficult to be cured; but there is no other way, than after you have used Attractives beneath, you apply Tapes to the Womb, which may draw the humors now in Motion, more to the same. § 3. But because the stoppage of the Courses is most frequent from Obstructions of the Womb, the cure is almost the same with that of the Green-sickness in Virgins, only with this Consideration, that such things be chosen which do more especially regard the Womb. § 4. First, the Body ought to be purged, and for this purpose Galen commends Pills of Hiera both Simple and Compound, because, besides their purging, they have a faculty of opening the passages and cleansing the Womb. Or this: R fine Aloes ʒiiij. Coccie minor. ʒj. with juice of Savin make twenty Pills: Dose three every day before Dinner. Or this: R leaves of Savin ʒx. roots of Calamint ʒviij. Sena ʒvj. choise Turbich ʒv. Crabs-Eyes bruised ʒiv. Agarick Trochisated ʒiiij. Carrot seed ʒij. Cloves ʒj. Mixt p. j. boyl in Barley water q. s. strain, and to ʒxxx thereof, add ʒj.

Syrup Diacnicu ʒij. Sal Armoniack ʒj. mix them: Dose ʒvj every Morning. Or this: R Pilulæ Aloephangine ʒj. Resin of Fallap gr.vj. Volatile Salts of Armoniack and of Amber, A gr.jv. Oyl of Marjoram gut.j. mix and make six Pills. Or this: R Pilulæ fetidæ ʒfs. Volatile Sal Armoniack gr.vj. Oyl of Mace gut.ij. mix and make seven Pills. Or this: R Rhubarb ʒfs. Aloes ʒj. Scammony, Calocynthis, A. ʒj. Myrrh, Asarum roots, A. ʒfs. Spicknard gr.xv. with Syrup of Mugwort make Pills. Dose a ʒij ad ʒj. Or this: R black Hellebor ʒj. Fallap, Bay and Juniper-berries, A ʒiv. round Birthwort, Galingal, Madder, Bryony, A ʒiij. leaves of Penny royal, Savin, Calamint, A.M.j. Cinna-mon, seeds of Lovage and Fennel, A ʒij. Cremor Tartari, Troches Albandal, A ʒj. Cloves ʒfs. cut, bruise, &c. and put thereto Rhe-nish Wine ʒiiv. Infuse three or four days in a warm place, then give every other Morning ʒiij. thereof with gut.vi. of Spirit of Sal Armoniack: Or this: R Pilulæ Cochie minor ʒfs. Mercurius dulcis ʒj. with Syrup of Roses Solutive make Pills for one Dose: Now this is to be noted, That these things are to be given a week, or ten, or fourteen days before the time of the Courses flowing, the precise time whereof you may learn by this Verse (*Luna verus veteres; juvenes nova Luna repurgat.*) and the reason is that such things as provoke the terms may be afterwards, timely enough given: because that if we overpass the time which Nature has limited

or appointed, we may chance to work in vain: § 5. The Body being thus prepared by purging, you must now give specifics, which have in themselves a virtue, power, or efficacy to provoke the Terms: Among which these following are numbred, Roots of Angelica, Bryony, Gentian, Masterwort Birthwort, Butter-bur, Zedoary, Galingal, Acorns, Elecampane, Madder, Eryngo, and the five opening roots: leaves of Featherfew, Calamint, Agrimony, Time, Organy, Bastard Dittany, Savin, Bawm, Mugwort, Penny-royal, Savory, Mint, Rue, Marjoram, Sage: Flowers of Hypericon, Lavender, Spick, Saffron, Marigolds, Rosmary, Wall-flowers: Seeds of Carrots, Lovage, Bay and Juniper-berries, Cubebs, Anacardiums, Pepper, Cloves, Mace, Nutmegs, Cinnamon: Gums, as Asa fetida, Myrrh, Amber, Bitumen, Guajaci, Pitch, Turpentine: Castoreum, Elks-Claws, Partridge quills: Steel and the various preparations of it: water of Swallows, Aqua Anhaltina: water of Myrsibr, Sennertits, Crollius: Tincture of Castor, of Juniper-berries, of Saffron: Tincture of Luna, of Antimony: Oyls of Mint, of Cinnamon, Cloves, Nutmegs, Angelica, of Savin distilled, which last doth very strongly provoke the Terms, therefore care ought to be had, least it be given to such as may be suspected: Oyls of Mint, Amber, Rue, Tartar stinking: Spirit of Sal Armoniack: Volatile Salts of Urine, Soot, Amber, Hartshorn: fixed Salts of Mugwort, Rue,

Tartar, Vitriolate; *Ens Veneris*, Elixir Proprietatis; Balsam of Sulphur, Uterine Balsam of Schroder: the Hytterick Tragea of Quercetan: Fœcula of Aron, of Bryony, of Radishes: Troches of Myrrh for a Suffumigation; Plaster of Galbanum, *Emplastrum Matricale*. Flowers of Layender eaten with Honey are said to be good: the Blood of a Goat wild or tame has a mighty Virtue prepared by *cap. 30. sect. 3. § 14.* Old Leaven ℥vj mixt with Troches of Myrrh ℥ij s and Sugar ℥j . taken three or four Mornings together is commended; so also *Pulvis partum provocans* Vulgar and of Our prescription: Or a Decoction of Guajacum and Sassafras, taken for fifteen days together: Tartar Vitriolate is highly approved, and we know it is excellent by experience, so also *Ens Veneris*, Volatile Sal Armoniack and Spirit of the same: *Mixtura simplex*, Tincture of Antimony (which is inferiour but to a few things:) Salts of Mugwort, Valerian, Bawm, and Celandine roots have here an especial property: To these add *Essentia Croci Martis*, *appetitivi*, *Vinum Chalybeatum*, *Pulvis Cachecticus*, Ox-Liver extracted with Essence of Myrrh, Essence of Garlic, Onions and Savin. Or give Essence of Black Hellebor, then a Dose of *Pilule ex duobus*; and after for three days, Tartar Vitriolate ℥ss mixt with juyce of Mugwort: putting the sick at times into a Carminative Bath: if these things do not, you must give Borax with Essence of Cro-

cus Martis gut. vii. and juyce of Savin ℥j in white Wine: Elixir of Pennyroyal is wonderful in this case: so also Elixir Proprietatis Maxij, viz. That which is made with the Quintessence of Sena. But above all we commend Tincture or Spirit of Tartar, Blood red Tincture of Black Pepper, and Blood red Tincture of Gum Guajaci in S.V. These things have hardly yet been known to fail. § 6. Among singular Compounds these things following have place: The Elixir of Michael. ℞ Mugwort M.ij . Herb Mercury, Marjoram, Sage, Penny-royal, Rosmary, Wallflowers, *A.Mj.* flowers of Marigolds, of Hypericon, Sage, Spike, *A. Pijj.* Saffron ℥xij . Antophyl ℥vii . roots of Lovage, Cresses, Rocket, Bawm, *A. ℥ij.* cut and bruise: sprinkle with Hermaproditical Spirit made of the Minera of Mars and Venus, to which put the Spleens of eight Oxen: macerate all with Spirit of Bawm and Pennyroyal, and draw it off in a Glass B.M. Dose ab ℥ss ad ℥ij s or more. A Poulder of Amber. ℞ Amber, Cinnamon, *A. ℥j.* Saffron ℥ss . mix and make a fine Poulder. Barbet his Wine of Castor. ℞ Castoreum ℥ss . Volatile Salts of Armoniack and of Amber, *A. ℥ij.* rectified S.V. ℥ij . Rhenish Wine ℥vj . Infuse twenty four hours, Strain, and give ℥ss . at a time. Poulder of Madder Compound: ℞ Madder (such as Dyers use) ℥j . Birthwort round, Savin, Dittany of Crete, Myrrh, *A. ℥j.* Borax ℥ij . make all into a fine poulder for six Doses. Pills for the same; ℞ Troches of Myrrh ℥j .

For *Dis.* with juyce of Mugwort, make small Pills. Barbet his Pills of Amber: *R* Amber, Tartar, Vitriolate, Salt of Mugwort, *A. gr.* vi. fine Aloes *gr.* xv. Oyl of Mint gut. j. make Pills for one Dose, to be often repeated. Pills of Montagnana: *R* Troches of Myrrh *℥ss.*, Parsly-seed, Castoreum, Cinnamon, *A. ℥j.* Musk *gr.* x. juyce of Smalage *q. s.* make one and twenty Pills: Dose three every Night going to Bed. Pills of Madder Compound: *R* Madder roots, round Birthwort, *A. ℥iij.* Agarick, Cinnamon, *A. ℥j.* with juyce of Mugwort make Pills: Dose *℥j.* Barbers Pills of the Catholick Extract: *R* Catholick Extract *℥j.* Gum Ammoniacum (prepared with Vinegar) *℥ss.* Castor, red Myrrh, *A. ℥j.* Salts of Mugwort, of Amber, Tartar Vitriolate, *A. ℥ss.* Troches Albandal *gr.* xij. Oyl of Mint gut. vi. mix and make fifty Pills: Dose three or four every Morning fasting. The Poudre of Prevotius: *R* Borax *℥j.* round Birthwort root, Savin, Dittany of Crete, *A. ℥ss.* fine sugar *℥ij.* make a fine Poudre for one Dose to be taken in gray Pease Broth. The secret Poudre: *R* Hawks'dung *℥j.* Borax *℥j.* make a fine Poudre to be taken in Savin water. Another Poudre from Precorius: *R* Mineral Chrysocol or Borax *℥j.* Cinnamon, Saffron, *A. ℥j.* make a Poudre to be given in White or Rhenish Wine, or Decoction of Mugwort, or Savin water. The Decoction of Quercetan: *R* Seeds of Gromwel, Anise, Misseltoe of the Oak, *A. ℥iij.* Dittany of Crete *℥j.* Saffron *℥j.* beat and steep all in

White or Rhenish Wine *q. s.* for twenty four hours: then boyle a little, strain, and give the Sick *℥iv.* But Quercetan mightily commends his Decoction Lænis Bovini, which see in Our Pharmacopæia. Riverius his Treacle water: *R* Old Venice Treacle *℥v.* red Myrrh *℥iiss.* sharp Cinnamon, Saffron, *A. ℥ss.* Camphir *℥iij.* S.V. rectified, enough to cover it three fingers breadth above the Ingredients, digest in a very gentle heat, then decant the Tincture without straining, to which add a sixth part of Spirit of Tartar: Dose one Spoonful in some appropriate Water or Wine. A Salt from Barbet: *R* Salts of Mugwort, Ash, Amber, *A. gr.* xij. Tartar Vitriolate *gr.* vi. mix for one Dose: It is a powerful thing. Deckers Pills: *R* Pulve fetida *℥j.* Sagapenum (prepared with Vinegar) red Myrrh, Volatile Sal Armoniack, *A. ℥ss.* Tartar Vitriolate, Castor, Saffron, *A. gr.* xv. Extracts of Gentian, of Savin. *A. ℥ss.* Extract of Black Hellebor *℥j.* Oyls of Mace and Mint, *A. gut.* iv. mix and make sixty Pills: Dose four every Morning fasting. Deckers Wine: Take Roots of Masterwort, of white Dittany, *A. ℥j.* sweet garden flag *℥ss.* leaves of Mugwort, Pennyroyal, Calamint, *A. Mls.* Savin Mjls. seeds of Carrots of Sefely, *A. ℥ss.* Juniper-berries *℥v.* Cinnamon, Orange peels, *A. ℥ij.* cut and grossly bruise all, to which put white Wine *℥iij.* digest warm for three days: Dose every morning *℥iij.* with gut. vi. of Spirit of Sal Armoniack. § 7. The last Consideration is the application of the Topicks: foment with a sponge the

Privities and parts adjacent with Diaclyfma ad Scorbuticum, or Gargarismus Sambucinus. Or let the sick fit up to her Navel in *Balneum contra menſtruorum ſuppreſſionem Mynſichti*, or *Contra ſterilitatem Mynſichti*, but let her take heed of Sweating, for that ſtops the Courſes. After the fomentation or Bath, anoint with Oyl of Ants : or Oyl of Rue mixt with Oyl of Savin diſtilled. If the Courſes flow not yet, you muſt inject into the Womb *Enema ad ſtrangulationem Uteri* : or *Emolliens Schroderi* : Or *Injeſtus ad Menſium ſuppreſſionem* : Or you may uſe Hartmans ſuffumigation thus made : Take dross of Regulus of Antimony ℥iv. boyl in a Lye of Mugwort Aſhes, with the Aſhes of other ſpecifick Herbs, to a redneſs of the Extract : ſtrain, and to ℥vj. hereof add Malmſey ℥ij. in which ſage and ſavin have been infuſed : let 2 ſpoonfuls be put upon Burning Coals, and the aſcending ſmoak be received by a Funnel into the Privities : Or you may anoint the Womb and Privities with the fat of an Eel or of a Snake : Or you may put up the Peſſary of *Angelus Sala*, thus made : R black Hellebor ℥j. ſteep it up in ſilk, and make a Peſſary to be often renewed ; but it ought not to be long retained becauſe it will Exulcerate. Or thus : R Powder of ſpotted Peach leaves, of Savin, Troches of Myrrh, A. ℥j. with Mucilage of Tragacanth in white Wine q. s. make two peſſaries. Or inſtead hereof you may uſe *Peffus Aperiens Mynſichti*. *Pilule cochlearis* made into the form of a Peſſary does excellently move

the Courſes : ſo alſo this Take Agarick, Myrrh, Hiera picra Benedicta Laxativa, A. ℥ii. long Birthwort ℥i. Galbanum ℥ſs. ſaffron ℥j. Clarified Honey q. s. make all into a Peſſary, which put into a thin rag, and put it up into the Womb : but let it not lye too long for fear of Inflammation. § 8. Theſe things are to be eſpecially noted : that Medicines moving the Courſes be not uſed, till after univerſal Purgations, leaſt the humors being plentifully carried to the Womb ſhould increaſe the Obſtructions, or create ſome worſe Diſeaſe : that Medicines producing the Courſes be given in greater quantity than ordinary, becauſe that their Virtues are abated in their long paſſage from the Stomach to the Womb. That Peſſaries and Injections are only to be preſcribed to Married Women, not to Virgins, but to the latter Fomentations, Baths and Suffumigations : And that in hot Cholerick and Melancholy Conſtitutions, all hot things are to be avoided : but with the milder ſort you may mix temperate aperitives with moiſt & emollient Medicaments.

XXII. *Αυτοεργαστον και υπερπερισσόν*, Menſium profluvium, overflowing of the Terms.

§ 1. The cure of this Diſeaſe is almoſt the ſame with the Cure of the flux of the Hæmorrhoids, you muſt make Revulſion by Frictions, Ligatures, Cupping-Glaſſes (which Riverius ſays, ought eſpecially to be faſtned upon her Duggs : but Barbet (no leſs a Learned and Experienced man) judges that application harmful ;) Emeticks, which

which do powerfully draw the Blood upwards, and is commended by *Hippocrates de Morbis mulier. lib. 2.* but it ought to be gentle, and often repeated. You may also make derivation by purging the Bowels, which you may do with the things named at *sect. VII. § 2.* reiterating the same once or twice a Week, till the Impurities of the Blood and Bowels are taken away. Or purge with this : *R. Rosin of Fallap, Agarick, Extract of Rhubarb, A. gr. v. Oyl of Mint gut. ij. make Pills for one Dose.* You must also rectify the ill quality of the Blood, as we in the aforecited place have taught, for if the Salt Chole- rick and Wheyish humours are taken away (which make the Blood thin and sharp) it will leave running of it self : if the ferous part seems most to abound *Mechoacan* with *Rhubarb* may do the work. § 2. After sufficient cleansing, you must use astringent and strengthning Medicines, such as in the aforementioned place we have enumerated ; to them may be added, Roots of Plantane, Water Lillys, Orrice : Leaves of Mint, Oak, Yarrow, Hounds- tongue, Mouse-tail : Flowers of Mullein, red Roses, Balau- stians : Seeds of Agnus Castus the greater, Corriander, Hemp, white Poppy, Hen-bane, Rue : Barks of Pomgraners, Oak : Gums, as Frankincense, Mastich, Turpentine, Amber, Camphir, Guajacum : Harts-horn, pre- pared, Cuttle bone, Spodium, Acacia, Coral, Pearl, *Lapis Hema- tites* : *Sanguis Draconis* in Drops, Oyl of Camphir, Tincture of ♂,

of Corals, Mastich Pills, *Lauda- num*, Asses dung, *Rhubarb* in sub- stance. The moss of a Mans Skull used inwardly or outwardly exceeds all : excellent also are the Stryptick Pills of *Myn- sicht* (in *Our Pharm. lib. 4. cap. 23. sect. 84.*) The Tincture of *Lapi- sis Hematitidis* : Essence of the Sulphur of Vitriol : *Mumia*, and *Laudanum*, which answers all Indications : The Pouder of Eggshells alone given ad ʒj. for several Mornings together is ac- counted a Secret ; so also Asses Milk with Steel : the Bones of a Man strongly calcined : the Pou- der of a Turtle Dove, Salt of the same : skin of Geese feet dry- ed, and given à ʒss ad ʒj. The Flowers of the common Thi- stle, with which the French Wo- men use to Curdle their Milk in making Cheesse : *Galen* com- mends the juyce of Plantane newly pressed given ad ʒiv. as the best Medicine in the World : and *Solemander* saith, That it never fails if to ʒij thereof you add Collophony in Pouder ʒj. and give it four or five times. Juyce of Yarrow ad ʒiij with Syrup of Coral is commended : Juyce of Nettles is affirmed by some to be inferiour to no o- ther thing, you may sweeten it with Syrup of the same. Water of tender Oak leaves of a redish colour, stops the flux : Gellys of Calves, Hogs, or Sheeps feet, made with leaves of Plantane or Bloodwort are excellent : the Vitriol of Mars is approved : so also the Essence of *Crocus Mar- tis abstersivus* : Magistery, Tin- cture and Salt of Corals and Pearls :

Pearls: Decoction of *Balaustians*, Pomgranate peels, unripe Bramble-berries, Sloes not perfectly ripe, &c. *Ludovicus Septalius* says, The Decoction of Orange Peels never fails. *R* Tunbridg water, or other common spring water ℥viij. rinds of three sower Oranges not thoroughly ripe, cut into little thin bits; boyl them till two third parts of the water is consumed, then strain: Dose ʒix. in the Morning fasting: If you would have it stronger put a handful of Mouse ear into it, when almost boyled, and quench red hot Steel in it divers times. This (saith *Septalius*) I cannot omit to set down, for therewith I have cured almost an infinite number of Women of this Disease: I kept it long as a secret, and afterwards communicated it to some young Students, whom I instructed in the Art of Practising Physick, and now for the good of Mankind, publish the same to the World, it has scarce ever failed, where no Vessels of the Womb were not exulcerated. The Decoction of Yarrow, or Mastich, or Mastichwood in Austere Wine, is very much commended: so also acid Mineral springs, whether they proceed from Vitriol, Iron, or Alum Mines, for as much as they both remove the Causes, and strengthens the Bowels. § 3. Among specifics are reckoned the aforesaid Decoction of Orange peels, Pouder and Salt of a Turtle Dove, skins of Geese feet, *Filipendula* roots, rinds of the Mulberry-tree root, given in Pouder to one Drachm: Conserve of Bramble flowers, and unripe Bramble-

berries; Flowers of Nut-tree gathered when ready to fall Pondred and given ʒj at a time in red Wine every Morning for several days: and *Solenander* saith, That he never found this Medicine to fail, it also peculiarly helps fits of the Mother: The same does Spicknard given in red Wine in fine Pouder ad ʒj. it quickly stops the Courtes: And Milk in which red hot Steel has been often quenched, being drunk many days together, does powerfully stop even an old flux of the Courtes. § 4. Among singular Compounds, these are chief. *Heurnius* his Pouder: *R* seeds of White Henbane, of White Poppy, A. ʒj. Bloodstone, red Coral, A. ʒss. Camphir ʒss. make a fine Pouder: Dose ʒss ad ʒj. The Pouder of Barber: *R* Salt of Amber, Dragons Blood, A. ʒss. *Diagredium* gr. vj, make a Pouder for one Dose. Another of the same Barber: *R* Dragons Blood, Crabs-Eyes prepared, common white Chalck, A. gr. viij. steel prepared, *Lapâ prunella*, A. gr. vj. make a Pouder for one Dose. The Pouder of *Helidaus*, commended by *Forestus*: *R* a Turtle Dove, draw and wash it with astringent red Wine: put Mastich ʒj. into its Belly and sew it up: roast it on a spit, and baste it only with Vinegar of Roses: when it is well roasted, put it into a new glased Pipkin, lute it strongly up, and set it in an Oven, till it is dry enough to Pouder: then Pouder it, and let the sick take a spoonful of it every Morning in Plantane Water, or red Wine. The Pouder commended by *Deckers*:
R roas

*R*oots of Tormentil, Bistort, Plantane, A. ʒj. red Coral prepared, Terra Sigillata, A. ʒij. Saccharum Saturni, Camphir, Balaustians, A. gr. vij. make a Powder for eight Doses, to be given in red Wine. The Powder of fine Bole Compound: *R* fine Bole ʒij. Amber, Sanguis Draconis, Blood-stone, red Coral Purslane seeds, A. ʒj. Balaustians ʒij. make a Powder: Dose ʒj in Plantane water or juyce thereof ʒij. The Powder of Michael Paschalis: *R* Eggshells N^o ij. calcined; Frankincense, Mastich, A. ʒss. Pearls and red Coral prepared, A. ʒij. Bloodstone and Emeralds prepared, A. ʒss. Barley flower P. ij. Whites of Eggs N^o iv. steeled water q. s. make all into a Past, and in two Cakes bake it so hard in an Oven, that it may be Poudred: Dose ad ʒj. in Gelly of Sheeps faet. The Decoction of Sylois de le Boe: *R* Bistort roots ʒij. Marjoram, Pennyroyal, A. M. j. Water and Wine, A. q. s. boyl and strain, to ʒxx whereof, put Syrup of Mugwort ʒj. Cinnamon water ʒls: Dose ʒij twice a day. The Water of Mercatus: *R* bread made of Barley Meal, Rice, and Wheat flower lbvii. break it to peice, and put upon it steeled water lbvij. to which add dried red Roses, Horetail, A. M. j. Purslane M. ij. Comfrey roots, pulp of Choak, Pears and Quinces, A. ʒij. fine Bole ʒj. Sanders the three sorts, A. ʒss. juyce of Plantane lbj. distil all in an Alembick: Dose of the Water ʒij mixt with ʒss of Syrup of Purslane, or of dried Roses: and here are memorable the Pulvis Dysentericus & Sperniole

Crollij. § 5. Among Topicks Re-
nealmus commends a girdle of the
leaves of bastard black Hellebor.
Deckers commend the following
Liniment: *R* Unguentum Co-
mitisse, Oyls of Mastich, Myrtles,
A. ʒj. Sugar of Saturn ʒss. Camphir
ʒj. mix for a Liniment. Or you
may first foment the share and
Privy parts with this Decoction:
R roots of Bistort, Pomgranate
peels, Cypress Nuts, Balaustians,
Myrtle-berries, Sumach, A. ʒj.
Harsh red wine, q. s. boyl and
strain. so also, Sea spung boyled
in strong Vinegar and applyed to
the Share and Privities strongly
repels the Blood. A Bath of the
aforesaid Decoction is good for
the sick to sit in. Anoint the
Perineum with Unguentum Co-
mitisse. A Cataplasim of fine
Bole made with juyce of Plan-
tane and a little Vinegar: Or a
Cataplasim made of Nettles fri-
ed in a pan, and layd upon the
Share and Privities, are very ef-
fectual, the latter working by
a specifick property. Injections
into the Womb, of juyce of Plan-
tane alone, are very effectual
and much cryed up by Practisers;
but none are more Powerful
than our Aqua Ophthalmica. Or
the Injectus ad fluxus Uteri.
Michael Paschalius saith, He cur-
ed a Woman seven Months ill
hereof, only with a Fume of
burnt Frogs: and he saith, That
the fume of a Mules hoof is
wonderful in this Cure. Some
also commend the Pessus adstrin-
gens Mynsichti. But this is to be
noted, that sufficient Revulsions
be made before Topicks be ap-
plied, lest some worse Disease
en-

ensues. § 6. If this Disease comes from an Exulceration of the Coats of the Veins, you must cure it, as an Ulcer of the Womb; and here universals premised, nothing is better (as an Injection) than Our *Agua Ophthalmica*: but some commend the Decoction of roots of Dropwort.

XXIII. Πιϋξ Ὑστερῶν, Suffocatio Uteri, Hysterick fits, or fits of the Mother.

§ 1. The Cure of this Disease we shall consider as it has relation to the Paroxysm, or the intermission. § 2. In the Paroxysm, you ought to bind the Belly hard about the Navel with a Girdle made of a Bucks-skin, kild in Coition with the Doe: you must make strong Ligatures, and painful frictions in the lower parts, and Cupping-Glasses are to be applyed to the Hips, and a very large one to the Shoulders; but beware of the Navel: from the Privities it is good to pluck off some Hairs, Cramp the Fingers and make a loud noise in her Ear. § 3. You may also make a Revulsion by Clysters Laxative and Carminative, for which purpose we commend *Enema Emolliens Schroderi*: if this be not sufficient, you must exhibit *Enema Carminativum Mynsichti* either according to that prescript, or mixt with Turpentine (dissolved with the yolk an Egg) ℥j. Oyl of Rue ℥ij. Camphir ℥ss. dissolved in Oyl of Juniper berries. If the fit yet continues, a third Clyster is to be given, viz. Clyster ad strangulationem Uteri. A Clyster of Vinegar mixt with water does presently assuage the fit.

§ 4. You may repel by proper fumigations, as the fumes of Partridge Feathers, Horse-Hoof Warts upon Horse Leggs, which are a specifick, an Eel skin, old Leather, Brimstone fired, Spirit of Sal Armoniack, *Assa fetida*, Spirit of Harts-horn, Oyls of Box and Guaiacum, *Oleum Phosphorum*, A Pomander of *Assa fetida*, *Castoreum*, *Galbanum* and Rue: to these things add all the Volatile Salts; the smoak of Tobacco blown into the Mouth and Nostrils: you may anoint the Nostrils with Oyls of Amber, Jet, or Sea-Cole; then provoke Sneezing with the Powder *sternutatorius* (in Our Pharm. lib. 4. cap. 21. sect. 62.) which action Hippocrates sect. 5. Aph. 35. affirms to be good. § 5. You must derive, draw and attract by sweet things: as R Oyl of Nutmegs by expression ℥j. Oyl of Civit ℥ss. mix, and with Cotton or Silk put it up to the Womb, so will it draw it down. Musk also is of extraordinary good use in this Case: and the *Pessus Uterinus Mynsichti* is much commended. To the Soles of the Feet you may lay an *Epispastick*, or drawing Cataplasme: R leaves of Tansy, Featherfew, Rue, Savin, A.M.j. Sage M.ss. Pigeons-dung powdered ℥ij. black soap ℥ij. Amber, Mastich, Olibanum, A. ℥ii. Vinegar, juyce of Rue, A. q. s. make a Cataplasme. And you may purge the Womb with this Pessary: R *Diaphœnicon* ℥j. species of *Hierapicra* ℥ss. Turpentine ℥ij. mix all, and make a Pessary. § 6. Outwardly to the Belly and Navel, you must apply things which discusse

apours, and strengthen : Outward-ly put to the Navel Oleum Jovis and salt of the same described by Crollius : Or you may anoint with Oyl of Almonds or Juniper-berries in which some grains of Camphir are dissolved, over which you may lay a Plaster of Diapalma : Musk gr. iij may be put into a Cotten moistened with Oyl of Civit, and put into the hole of the Navel, over which you may lay *Emplastrum Cephalicum*. Or this, *R Gum Caranna ʒiv. Turpentine ʒij. powder of Nutmegs ʒj. of Cloves ʒss. Oyl of Amber gut. iv.* make all into a Plaster, which make in the form of an Escutcheon, towards the bottom of which put some grains of Musk or Civit, thereby to allure the Womb down.

§ 7. If the Disease proceeds from Wind and Vapours, you may put the sick into a Carminative and Discussive Bath, made of Tansey, Rue, Time, Calamint, Camomil, Sage, Rosemary, Hyssop, Seeds of Annis, Fennel, Cumin, and Dill, Bay and Juniper-berries, &c. Or, *R Oyls of Rue and Wormwood, A. ʒij. Oyl of Juniper ʒiv.* mix, and dip therein Bread hot out of the Oven, and lay upon the Navel : you may also anoint the Region of the Womb, Share, and Loyns with Oyls of Spike, Juniper and Amber mixt with Oyl of Nutmegs by Expression, one part, and Oyl of Almonds two parts. § 8. If it proceeds from plenty, corruption and retention of the seed, if the Creature be a married Wife, it ought to have evacuation by manifold coitions : but where that

cannot be, (universals being promised) it must be emptied by Clysters and Uterine Pessaries ; by Medicines diminishing the seed and by a slender and hard diet. § 9. These things being considered, we now come to the use of Internals, or things given inwardly by the Mouth. The *Trochisci Joviales Mynsichti*, cure the fit to a wonder. But Our Powers or Quintessence of Sea-Cole, are scarcely inferiour to any thing which we have tryed, given ad ʒj in Sack. You may also give in the fit *Aqua Vitæ*, Cinnamon water, or Treacle water ; Our *Potestates Succini* given ad ʒss in Orange Flower water, cause the fit to vanish Immediately : So also old Venice Treacle, Troches of Myrrh ad ʒij in Waters of Mugwort, Pennyroyal or Bawm : The *Potestates Guajaci & Buxi* are powerful in this Case, so also the *Spirit de Cornucervi*, Salt of Hartshorn, of Amber, and of Mans Skull, Orange flower water alone given ad ʒiv. is said to be excellent ; but if it be given with Musk, *Dragons Blood, A. gr. xiv.* it cures to a Miracle, as if it was by Incantment, nor does the grief return any more from the old Cause. Pouder of Elks Claws, as also the Powers and Oyl of them are very effectual in the same cure, which is confirmed by *Apolonius Menelaus* : Extracts of Castor and of Liverwort are prevalent ; so also Oyl, Spirit and Salt of Tartar, Tincture and Essence of Castor ; *Harimans Essentia Granorum Chamæædes* given to a spoonful in Pennyroyal

royal or Treacle water : *Quercetans* *Tragea* of Elder-berries, Powder of Jeat given $\text{à } 3\text{ss}$ ad $3j$. Chimney-soot taken in the same quantity, Oyl and Salt of Soot, the Afterbirth of a Womans first lying in, given ad $3j$ or $3iv$. The Powder of Brimstone p.ij. mixt with Nutmegs p.j. in the same quantity : The Cats Tail of a Walnut-tree, being given ad $3j$, with gut.ii or iiij of Oyl of Amber, than which there is nothing more excellent in this Disease. Moreover *Pil.fetida Majores*, although purging, yet are given with good success in the fit : so also Camphir fired, and cast into water, there staying till it is quenched, given ad $3j$. but this observe concerning whar we have said, that if the Woman be with Child, you avoid the more foetid Medicaments, least you cause her to miscarry, and also, rather to use outward than inward Medicines. § 10. Among singular Compounds we have these : Take Uterine Tincture of *Mynsicht*, or *Aqua Hysterica*, or *Aqua Bryonia Composita*, $3ij$. water of Citron peels, Treacle water, Syrup of Mugwort $3j$. Spirit of Castor $3j$, Spirit of *Sal Armoniack* $3j$. Oyl of Amber, gut. iv. mix them, and let the sick take a spoonful or two of the mixture, and sometimes you may with good success dissolve a grain or two of *Laudanum* in the said Composition. A Potion : Take waters of Mugwort, Roses, Orange-flowers, A. $3j$. Cinnamon water 3ss . Confect of Hyacinths $3j$. *Diamargariton frigidum* 3ss . Saffron gr. iv. mix and make a Potion : but if

the sick was Melancholy before the fit, or the Body bound, you may put into the former Composition Spirit of *Sal Armoniack* 3ss . Another Potion : Take Orange flower water $3iv$. *Aqua Hysterica* $3j$. Cinnamon water 3ss . Spirit of *Sal Armoniack* $3j$. Castor gr. iv. mix them. A distilled water : Take juices of Broom and Borrage clarified, A. $3ij$. Saffron $3ij$. digest twenty four hours, then distil in B.M. Dose one spoonful with Broth, it is an admirable thing. A Specifick water : Take Gentian, Zedoary, A. $3ij$. Peony Roots $3iv$. Mistecoe of the Oak (gathered at the change of the Moon) $3v$. red Myrrh, Castoreum, A. $3j$. Saffron $3j$. being prepared, put upon them Orange flower water $3lv$. *Aqua Hysterica* $3ij\text{ss}$. digest three days then distil : Dose one spoonful. Pills for the same purpose : Take *Ammoniacum*, Myrrh, Galbanum, *Assa fetida*, A. $3j$. mix, and make Pills with a little Vinegar : Dose 3ss . Or this : Take Castor, Myrrh, Galbanum, *Assa fetida*, A. $3j$. Volatile *Sal Armoniack* and of Hartshorn, A. 3ss . Saffron gr. vj. Dose $3j$ or more, Pills which, as *Riverius* saith, fail not : Take *Assa fetida*, A. $3j$. Castor gr. vj. *Laudanum* gr. iiij. make three or four Pills for one Dose.

The Cure of this Disease in the Intermission.

§ 11. You must first give Opening things as Oyl of sweet Almonds mixt with Oyl of Tartar per deliquium ; after *Decoctum Aperientium*

troum minus with Spirit of Sal Armoniack or Volatile Salt of the same, or with dulcified Spirit of Niter: Or the *Decoctum Aperituum majus* with Rhubarb.

§ 12. After the body is opened sufficiently, you must thoroughly purge and evacuate the vitious humours, which must be done by degrees, and by a long reiterated continuation of purging Medicines. and if also you change your Catharticks often, it will be so much the better: Grulingius his Extract of Bryony is good here; so also Agricola his stores & Virrioli Veneris & Martis, mixt with Extract of Rhubarb and other Purges; to these add *Tinctura Cathartica Clossai*, *Catholica*, *Phlegmagoga*, *Hydragoga*, & *Melanagoga Grulingij*: Tincture of Sena, with which Purges you would always do well to mix some Hysterick Medicaments.

§ 13. If it comes of Hypochondriack Melancholy, you must begin the Cure accordingly: cleanse the Womb of its Impurities with Extract of Bryony aforementioned, Mechoacan, Tincture of Sena and Jallap, which mixt with Spiritus Hystericus, giving them twice a day for thirty days together. Or this; R *Rosa of Jallap*, *Diagridium*, A. gr. iv. *Mercurius Dulcis* gr. iij. *Tartar Vitriolate* Sal Armoniack, A. gr. vj. Oyl of Mace gr. ij. mix and make a Powder. *Pilule Holagogæ* are admirable, so also *Confectio Hamech*, where the Disease is old, stubborn and rebellious: R *Sena*, *Bryony roots*, A. ℥ss. *Agarick*, *Cinnamon*, A. ℥j. *Ginger* ℥j. *Spring water* ℥viij. Infuse twenty four hours, strain,

and sweeten with Syrup of Roses Solutive ℥j. Or instead thereof you may purge with *Pilule scetide majores*; or with *Carocostinum* mixt with *Tinctura Uterina Mynsichti*: Or with Castor and the *Fæcula Bryonia*. But some have been cur'd (as Mathi-olus testifies) only with a Decoction of Bryony root, in white wine being drunk once a Week for a year together, tis doubtless a wonderful thing. § 14. If the sick is inclinable or easy to Vomit, you ought to farther it, which you may do with Sal Vitrioli given a ℥ss ad ℥j, in some proper Vehicle: (which is a specifick in Hysterick fits) or with this: R *Bawm and Mugwort water*, A. ℥iii. *Oxymel* ℥j. *Troches of Agarick* ℥jss. mix for a Potion: after every particular evacuation, you ought to give things strengthening the Stomach and Womb, such are Venice Treacle alone, or mixt with Conserve of Wood Sorrel; Or this, R *Spirit of Angelica* ℥iv. *Oyl of Cinnamon* ℥ss. *Oyl of Cloves* ℥ss. mix them. § 15. Universals having thus preceeded, to discuss the remainders of the Morbifick matter, it will be requisite that the Patient take a sudorifick Decoction for many days together, made of Guajacum, Sarsa, Sassafras, with Seeds of Fennel, Rue and Agnus Castus; but in this Case, as an excellent thing, we commend the *Decoctum sudorificum Emperici Germani*, to be taken for a Month together: Or the *Tinctura Diaphoretica Paracelsi*. § 16. The Womb is to be strengthened, and the Disease to be resisted, by such things as are spe-

C c c c i s i c k s

cificks in the Cure of this Disease. The Liver of a Woolf dryed and taken ʒj at a time is good; so is the *Vitriolum Martis* given a grain or two with double quantity of Sugar; but it may be given ad gr. xij. xv. or ʒj. in Conserve of Peony flowers. *Mithridate* is good mixt with Salt and Conserve of Mugwort; *Cremor Tartari* often taken is of good use, so is *Tartar Chalybeated*, and the Preparations of Steel mentioned in the Obstructions of the Liver Sect. IX. § 4. aforegoing. *Laudanum Paracelsi* prudently given is famous, so are *Civet*, *Musk*, and *Ambergrise*: and in a word all those things which we enumerated in the Cure of this Disease in the *Paroxysm* or fit, whether Simple or Compound; to which may be added *Extractum Uterinum Mynsichti*, *Extr. Diapenias Mindereri*, *Castorei Zwelferi*, *Antepilepticum Zwelferi*, *Hystericum Schroderi*, *Matricale Schroderi*, *Hystericum Hörstij*, *Aureum Hadriani*, *Sal Uterinum*, *Vinum uterinum Schroderi*. *Acetum Hystericum Mynsichti*, with many others which in Our *Pharm.* you may see at large. § 17. Among singular Compounds we have these. *Platerus* his sweet scented Pills: R Benjamin ʒss. Musk gr. vj. Sugar ʒj. Cinnamon water q.s. make Pills: Dose ʒj. Pills of *Assa Compound*: R Castor, Myrrh, Galbanum, Sagapenum, A. ʒj. *Assa foetida* ʒss. with Honey of Herb Mercury q.s. make Pills: Dose ʒj. A Compound Pouder for fits: R Saffron ʒijss. Gentian roots, white Diſcamus, Tormentil, Pellitory, Rhaponticum, Bisfort,

Round Birthwort, Chamelion Thistle, Bay-berries, Angelica, Masterwort, Seeds of Corsander, Anise, Juniper-berries, Mastich, fine bole, Terra sigillata, A. ʒijss. make a fine Pouder, which keep in a Glass close stoppt: dose ʒj. in Wine, or Conserve of Wood Sorrel, it is said to Cure, be the Disease never so old and stubborn. § 18. Some help forwards this cure much with Amulets, put about the Neck, and hanging down by a string upon the Navel: for which purpose we commend Elks claw made smooth and flat; Pucedanum or Hog-Fennel: *Assa foetida* tyed up in a Rag: Dried Stones and Pizzle of a Fox, dried Woolfs flesh, or Liver of the same dried, and Vervain or Mugwort-root dried, &c: § 19. Among Topicks or Externals Baths are proper, made of Vinegar and Water, to sit in, (which may also be drunk down, and injected:) Or fomentations of the same, that the humour causing the Disease being resolved, may the more easily find its way by the opened passages of the Courses, and so flow out with them: these Baths may be made of Bryony roots, Madder, Valerian, Angelica, Nep, Mugwort, Bawm, Featherfew, Savory, Time, Hyssop, Bay-berries. After the Bath to strengthen and confirm the Womb, apply *Emplastrum Hystericum*, or that of Our Prescription (which see in Our *Doron*.) Or the *Emplastrum Cephalicum Schroderi*, which is inferiour to none.

XXIV. Inflammation of the Guts.

§ 1. The Cure is to be managed

according to the Rule of other Inflammations; and it ought to be speedy, because the Disease is acute, and often degenerates into Gangreen and Mortification. § 2. You must administer cooling things, but without Astringent least the Tumour should grow greater; and nor purging least the Pain be exasperated; Whey of Goats Milk, and indeed all sorts of Whey are good; more especially boyled with Succory, and other cooling Herbs: you may also sharpen all their drink with Oyls of Sulphur or Vitriol, because they go through all the Veins, and cool the whole mass of Blood: spirit of Sal Armoniack is of great advantage in this Cure, § 3. If it be from a falling out of Guts, by reason of a Rupture of the Peritonæum; the Guts ought presently to be reduced. § 4. If it be from a Contusion: besides those things which are proper for the Inflammation, you must add things concocting and lenifying. § 5. If it be from a Rupture of the Navel, you must see its cure in its proper place.

XXV. Straitness of the Guts, Or obstructions of the Bowels.

§ 1. If it be from things taken in which are drying and binding, as Quinces, old Cheese, &c. you must use things fat and oily, Emollient and Humecting, as Oyl of sweet Almonds, Almond Milk, fat Broths, Whey, Emollient Clysters, &c. § 2. If it be from excrements hardened, you must use mollifiers, as a Bath of sweet water with emollient Herbs: the grease of a roasted Goose cast in by Clyster: you may

blow up the Guts with a pair of Bellows; after which you may give a strong Clyster, with 3ls of Sal Gem. § 3. If it be from thick Flegm, it is cured by such things as cut Flegm, together with sharp Clysters; nor does the Cure differ much from the Chollick, to which we refer you. § 4. If it be from growing together of the Guts, it is incurable: but if from Inflammation, see the former Section: if from Worms, or a Rupture, see their proper places.

XXVI. Κήλη, 'Pñξis, Ramex, Ruptura, A Rupture, or Burstiness.

§ 1. The Cure is considered first in replacing of the Guts, which if they be tumified with Wind, (as rumbling and breaking of Wind does witness) you must use Discussives both inwardly and outwardly. If they swell with hardened Excrements, you must apply emollient Fomentations, Cataplasms, and Clysters: If with a thick Flegmatick matter, you must empty by little and little with Clysters and Suppositories; making also the matter thin, and cutting it, by attenuaters and inciders given by the Mouth: If these things do nothing, you must come to manual Operation. § 2. Secondly, in retaining them in their places: for which purpose Horse-tongue is most excellent, the Powder of Mouse-Ear given with Meats, Through-Wax Rupturewort, the Syrup. Gelly, Conserve, or Blood of Comfrey, the Ashes of a sucking Hare given in Red Wine: The Seed of Flixweed mixt with the Powder of Fern root, or of the whole
Ccc 2 Plant,

Plant, A. ʒiſs. given in Broth or astringent Wine for one Dose: Applying also over the place of the Rupture a proper Emplaster with good bandage or a Truss.

§ 3. *If it be a Rupture of the Peritonæum, you must apply Cera-tum ex pelle Arietina Arnoldi de Villa nova, with a Truss or good Ligature; anointing first with Unguentum Adstringens: Inwardly give Essence or Blood of Comfry with gut.ij or iij of Bals. of Sal Gem. To anoint also with the fat of a Hedge-hog, much helps Conglutination.* § 4. *If it be Exomphalos, or Omphalocele, and the Disease is recent, foment it with a Decoction of Tree moss and Self-heal made in astringent Wine, to which add a little spirit of Wine: afterwards lay on a Cataplasm of Plantane-leaves and Lentils: but if the Disease is old, after Fomenting, as aforesaid, anoint with an Oyntment of Mushrooms, or Oyl of Nuts mixt with Oyntment of Sumach. with convenient Plasters and Ligature: Inwardly give Essence or Blood of Comfry with Balsam of Sal Gem: See the Cure of a Rupture more at large in cap. 14. sect. 13, 14, 15, 16, 17, 18, and 19. and in cap. 22. sect. 5. aforegoing.*

XXVII. Procidentia Ani,
The falling out of the Funda-
ment.

§ 1. *The Cure is done first by fomenting or anointing the Gut with emollients and warming things, and so gently putting it up with the Hand: If it falls out again, it ought to be anointed with Unguentum adstringens, or*

that of Sumach. § 2. *That it may be retained in its place, you must use astringent Decoctions, Infusions or Poulters, made of Frankincense, Mastich, Mirtles, Crocus Martis astringens: the Ashes of Beetles, and of Sheeps-dung, strewed upon the Gut.* § 3. *Inwardly you may give Decoction of the root of wild Self-heal, and other like things, which strengthen the part.* § 4. *If it comes from great straining in going to stool, you must keep the Belly soluble with Whey, Broth of Tamarinds, Cassia, &c.* § 5. *If it comes from taking of cold, you must apply things which may help the cold distemper, and strengthen the Nerves, among which Oyls of Camomil Vulgar, and Oyl of Amber are chief.* § 6. *If it comes from a Resolution, by reason of a Contusion, you must use things Vulnerary and Consolidating: Inwardly give Traumaticks.* § 7. *If it comes by reason of a Dysentery, or Tenesmus, or Fistula about the Sphincter, you must cure it as we teach in their proper places. See cap. 14. sect. 22. aforegoing.*

XXVIII. Costiveness of the Body.

§ 1. *That the Excrements may be softened you must several times exhibit Enema Emollientia Schroderi. Or this: R broth of Sheeps Entrails lbj. fresh butter ʒiij. brown Sugar ʒjss. Cassia; Diacatholicon, Diaprunum, A. ʒss. mix and make a Clyster: Or if the excrements be very hard and the Disease of long continuance give Oyl Olive lbj. only for a Clyster: Or R Oyl lbj. Oyl of Tartar per deliquium ʒss.*

℥ss. mix for a Clyster. § 2. Outwardly you may use Solenanders Liniment, anointing it upon the Navel, which is thus made : ℞ Oyl Olive, Oyl of sweet Almonds, Goose-grease, May-butter, Dialthea, A. ʒij. Salt ʒss. Hiera simple ʒj. Colocynthis gr. xvj. Scammony gr. iv, mix them. Moreover bathing in a Tub, with a decoction of Emollient herbs is very profitable, because it moistens all the parts, mollifies the Bowels and keeps the Belly soluble. § 3. Inwardly give Broth of Prunes ʒlss or ʒlj sweetned with Manna ʒj. or as much of Syrup of Roses Solutive, Or a Decoction of Beets and Mercury made of Chicken Broth, or other fat Broth, sweetned with Manna ʒlss. Oyl of sweet Almonds ab ʒjad iij. sweetned with Manna ʒj. is good in this case : so also sweet Prunes and roasted Apples with Sugar, if taken an hour before Dinner : Or an ounce or two of fresh butter eaten before Meals with Bread; Or this, ℞ Cassia new drawn ʒj. Cremor Tartari ʒj. mix for a Bolus, Or this : ℞ Pulp of Cassia ʒij. Tamarinds, Manna, A. ʒj. Ponder of Sena ʒss. Cremor Tartari ʒij. with Syrup of Roses Solutive make a soft Electuary : but the best of all things is the Tincture of Sena in Canary ʒij. mixt with Pulp of Cassia and Manna A. ʒj.

XXIX. Coeliaca, The Coeliack Passion.

§ 1. This Differs from a Lienteria only in degree ; for as in a Lienteria, the food is sent through the Belly unchanged : so in a Coeliaca, the meat comes forth crude

and imperfectly concocted : Hence it appears, That the Lienteria, is the Act abolished, the Coeliaca the act only diminished. § 2. The Stomach in this Disease is chiefly distempered ; and therefore in the Cure, after a gentle evacuation, both by Vomit and Stool ; you must give things which strengthen the Stomach by restoring of its Native heat, this is best done with Salt, Tincture & Essence of Wormwood, Salt of Centory, Quintessence or Powers of Cinamon, Nutmegs, and Cloves, and other things which are pleasant, grateful, & leave an Astringency upon the Stomach. § 3. But it is chiefly cured as a Lienteria, and with the same Medicines ; to which for Brevity sake we shall refer you. See sect. 4. foregoing.

XXX. Inflammation of the Intestinum rectum, Or Arse-Gut.

§ 1. The Cure follows the Method of other Inflammations : where in you must be cautious of using things too cold, lest you indurate the parts, or endanger a Gangreen.

§ 2. The Medicaments exhibited must be either in form of Clysters ; Or of a Suppository, which if proper may have power to discuss or Resolve the Tumor : I have known this cure performed once by the smoak of Tobacco driven up the Fundament, to the Admiration of the Sick : Clysters of Oyl of Dill and Rue mixt with Chicken Broth, are of good use ; and if the heat be great, you may dissolve in the Broth ʒij of Cremor Tartari ; and afterwards mix therewith the yolk of an Egg. Oyl of Elder is a specifick for this purpose. § 3. If it will

not resolve, it degenerates into an *Aposteme*, whence when broken, comes an *Ulcer*, which you must heal by giving cleansing, vulnerary and astringent things, both by the Mouth and Fundament.

XXXI. Verrucæ Ani, Warts of the Anus or Fundament, or pain of the Hæmorrhoids.

§ 1. *These whether Condylomata, Thymi, Ficus, or Crista, are for the most part all cured by Chyrurgery, and require but one method for their taking away: so that a singular Cure for each is not to be laid down here.* § 2. *First, make Revulsion by Frictions, Ligatures and Cupping in the upper parts, as Arms, Shoulders, Back, &c. Then give a gentle Emetick, as Oxymel Scylliticum, Sal Vitrioli, &c. which makes a notable Revulsion.* § 3. *Secondly, Keep the Body soluble, as we have taught at Sect. 28. foregoing: Cassia dissolved in Tincture of Sena with Aniseeds is good; if the humors be very sharp, you may give an Emulsion of the cold Seeds.* § 4. *Now you must come to the application of Topicks, which are to ease the pain and to discuss. These things are said to ease the pain: Oyls of Box-tree, a miraculous thing, of Almonds, of Peach-Kernels, of Poppy and Henbane-seeds, Oyl of Nuts in which Sows have been boyled: Or common Oyl, Oyl of Eggs: Oyntment of wild Flax, and its Flowers made with Hogs grease mixt when applyed with the yolk of an Egg, which eases the pain miraculously: a Liniment made of roasted Leeks or Oni-*

ons beaten up with fresh butter: Ballam of Sulphur, Oyl of Hypericon, of Roses, and of Violets: A Cataplasim of Leek-heads, or of Garlick made with Oyl of Myrtles, Oyl of Elder, Cataplasim of Elder leaves in water: Elder leaves beaten cold with Oyl of Amber, Fomentations of emollient Herbs, a suppository of Goats-Suet and Opium: the Lungs of a Goat applyed hot. § 5. *These things following Discuss: Oyntment of Gum Ammoniacum, Oyl of Eggs ground in a Leaden Mortar: Oyl of Box one drop laid on with a little Lint, or mixt with ten times its quantity of Oyl of Linseed, which does wonders: Cataplasim of Onions: Hens grease half an ounce mixt with as much Unguentum Populeon and half a drachm of Saffron, where, if the pain is great add a little Opium. Purslane stamped and applyed, eases pain, abates the Swelling, heals the Ulcer if there be any, and consumes proud flesh: a fomentation of red Wine wherein Alum is dissolved: Decoction of Polypody and Hypericon in Wine and Water Ana: A Fumigation of Mullein, Darnel, Pilewort, and Sulphur cast upon live Coals: Rose water in which Salt of Lead has bin dissolved: Oyl of Roses and Spike roasted in a hollow Orange, applyed hot and repeated is wonderful.* § 6. *If they will not be discussed, you must rub them with a rough Cloth dipt in juyce of Onions in which Aloes ʒj. was dissolved, as Hartman advises. but they are opened sooner and with less pain, with an Incision*
Knife

Knife or Horsfleeces. § 7. *If they be Ulcerated, anoint them with Oyl of Eggs ground in a Leaden Mortar, or with other things which cleanse and dry.* § 8. *These are specifics (where they are not broken) both to ease pain and discuss, Oyl of Amber Simple or mixt with Oyl of Almonds.* Ana, Oyntment of Pilewort, Athes of Mouse-dung boyled with Wine and applyed. § 9. *Inwardly Pills of Bdellium taken often, do consume the Piles, and insensibly take away their cause; juyce of Mullein mixt with Sugar of Roses, Decoction of Yarrow or Trefoil, taken as ordinary Drink: Or Pouders of Yarrow; Tormentil or Mullein, given in Milk have great effects.*

XXXII. Rhagades, Ulcers in or near the Fundament like Clefts in the Hands.

§ 1. *These for the most part, whether ulcerated or not, are cured by the rules delivered in the former section, to which we shall in part refer you.* § 2. *If they come from a dry distemper, you must use such things as mollify and moisten, as Oyl of Almonds, Hogs-grease, Sheeps or Goats-Suet, Unguentum Populeon.* § 3. *If they come from the flowing of sharp and corrosive humors, you ought to purge with gentle and humefying things, as Cassia, Diacassia, Electuarium Lenitivum: after you may exhibit this Clyster, R^x Mucilage of Tragacanth, of seeds of fleawort, A. ʒij. fresh butter ʒiij. Oyl of Violets ʒv. brown Sugar ʒj. mix them: then anoint them with Unguentum de Plumbo.*

XXXIII. Fistula in Ano, A Fistula in the Fundament.

§ 1. *If the Fistula is to be cured by manual Operation, let the Sick lye so upon his Back, that lifting up his Leggs, his Thighs may press his Belly: then let the Artist put his Finger anoynted with Oyl of Roses, into the Fundament, and thrust in at the Orifice of the Fistula a thick leaden Needle, drawing after it a Thread made of Thread and Horse hairs, made up together, which taking hold of with his Finger, somewhat crooking of it, let it be drawn forth at the Fundament, together with the end of the Thread: after let the two ends of the Thread be tyed of a drawing knot, that they may be straightned at Pleasure. But before you bind them, you may draw the Thread somewhat roughly towards you, as if you meant to saw the flesh, that thereby the Fistula may be cut, without the fear of an Hoemorrhage.* § 2. *If the Fistula penetrates not into the Gut, so that the Finger cannot meet with the Needle, then put in a hollow Iron or silver Probe, and through the cavity thereof, thrust a sharp pointed Needle, which by pricking and cutting may destroy the Callous, which being wasted, the Fistula must be bound up: unless it be superficially which needs no binding, but must be only cut with a crooked Incision Knife, and then the rest of the cure performed after the manner of other Ulcers: if any part of the Callous remains the Fistula will revive again, and cause a Re-*
Ccc 4 laple.

lapfe. § 3. If the *Callus* is to be consumed by Medicaments *Sculterus* prescribes this: R *Arsnick* prepared ʒss. Honey of *Roses* ʒss. mix them: after which the Wound must be filted with flesh and skinned. § 4. Those *Fistulae* which penetrate the Guts are seldom cured: those which penetrate not, are to be mundified with Decoction of *Agrimony* and a little *Alum*: the Orifice if it be too narrow may be dilated with *Elder Pith*, that the filth may not be retained. Among things consolidating *Joel* commends *Mercurius precipitate* strewed on and laying over it a common *Emplaster*: so also *Arsenick* prepared or reduced to an Oyl. § 5. If the *Fistula* will admit of Cure, universals must be premised with a *Vulnery* diet, and a continual taking of prepared *Sow's* or *Hog-Lice*: after which they must be dilated, or cut, washed, cleansed, filled with flesh, and healed as other *Ulcers*.

XXXIV. Fluxus Hepaticus, A Flux of the Liver.

§ 1. In the Cure of this Disease we must avoid purging, and exhibit only such things as alter and strengthen the Liver: you must therefore first correct the Distemper of the Liver, then stay the Flux: but it is said that *Rhubarb* may be given (although a Purgative) either alone or with *Myrobalans* (as in the *Dysentery*) because it doth strengthen the Liver. And many sick of this Disease have been cured with *Rhubarb* ʒj given many days in Conserve of *Roses*. § 2. Then you must cool the hot distemper of the Liver with this cooling *Juleb*, often to be repeated: R *Plantane water*

ʒiv. Syrup of dried *Roses* ʒj. spirit of *Vitriol*, as much as will make it sharp. § 3. To strengthen the Liver and stop the flux, *Hens-livers*, *Chickens* and *Geese stones* are commended: so also *Pulvis Haly*, Syrups of *Myrtles*, *Quinces* and dried *Roses*, *Diacodium solidum*, *Saccharum Refatum Tabularum*, *Diacodium in solido Atiuarj*, *Rob* of *Currans* and *Barberries*, *Marmalade* of *Quinces*, *Rob Cynosbati*, *Rob Epaticum frigidum*, Syrup of *Coral*, or the *Lincture* which is much better, *Crocus Martis*, juyce of *Nettles*, *Confectio Alkerimes*, *Narcoticks*.

XXXV. Obstructions of the Mesentery.

§ 1. This cure is performed first by openers which are indeed gentle, which may a little astringe, dry, resist putrefaction, cut and attenuate humors, and strengthen the Stomach and Liver: here sweet things must be forborn: you may give bitter things in the form of an *Electuary* or of *Pills*, drinking a stomachick liquor after them: *Tartarous* things are also good (unless the humors be sharp,) *Oxymel* and *Oxymel of Squils*. § 2. Secondly, by purgers which are gentle, given now and then, often changed, and in a liquid form. § 3. Thirdly, by emeticks not violent, such as *Sal Vitrioli*, *Platerus* his *Essence of Broom*. § 4. Fourthly, by *Diureticks*, which make the humors fluxe as *Salt of Broom*, *Eggshells calcined*, *Liquor of Tartar* all given in oil of *Sweet Almonds*. § 5. By *Specificks*, as *Penotus* his *arcanum of Vitriol*, *Sulphur* and *Swallows*: *Mercatus* his *antidote of Steel*.

Finkius his steeld Wine, and other things of like Nature. If these things do not, you must cure it exactly as you do an Obstruction of the Liver, at Sect. IX. foregoing.

XXXVI. Inflammation of the Mesentery.

§ 1. You must cure it as you do other Inflammations, chiefly that of the Liver, to which we shall here refer you. See in Sect. XXXIX following. § 2. Yet these things are to be noted, first, that the coolers ought to be the more benign and gentle, lest the matter be the more Impacted. § 3. Secondly, that the purgers must be either none, or very mild; nor in the beginning, lest more matter be attracted, but when the Inflammation tends to Concoction. Cassia in this Case, is scarcely safe enough.

XXXVII. Apostems of the Mesentery.

§ 1. In the Cure of an Aposteme there is required Opening and Evacuation: but first it must be softened with opening & purging Medicines, such as we have signified in the Obstructions of the Liver and Spleen, wherein observe that the Belly be always kept loose. § 2. Outwardly you must apply Fomentations, Cataplasms and Liniments, which are of a softning and loosening nature, which may make the matter of the Apostem thin, and help to open the passages that the matter may be the better avoided. § 3. When the Aposteme is opened, you must cleanse the Ulcer with deterfives avoiding all sharp things because they corrode the Ulcer, among which Mercatus his Syrup of steel bears the Palm.

§ 4. Then you must consolidate and heal it, for which purpose Cypress-Turpentine any ways prepared is to be preferred, before all things, especially if the matter offending lurks in the Loins, and about the Kidnies: so also those other things prescribed in the Cure of the Ulcers of the Stomach, Liver, Reins and Womb, of which choise is to be made according to the disposition of the Body. § 5. For the speedier ripening of the Aposteme, a Bath of water is to be often used. § 6. That the strength of the sick be repaired and confirmed, which may be exceedingly done with Essence of Asmart and Oyl of Virriol.

XXXVIII. Pain of the Mesentery.

§ 1. The Cure is performed, first by taking away the Causes: Secondly by mitigation of the Pain. § 2. The Cause is taken away, first, by Clysters which mollify made of Goats-Milk, Cassia, and Oyl of Violets: and Clysters which cleanse, which are made by adding to the former a little Hiera Picra and Honey of Violets. § 3. Secondly, by Purging at certain intervals of time with gentle things, if there be Obstructions, which are perceived by the water: but Manna is to be excluded, by reason of its Windiness. § 4. Thirdly, by giving Aperitives, as the Decoction of Scorzonera, Grass, Strawberryes with the Cordial flowers: anointing the Belly also with Oyls of Dill, Camomil and Violets mixt with Oyl of Vipers. § 5. The pain is mitigated with Fomentations, Bath, Unctions, Cataplasms, Narcotics, &c.

XXXIX.

XXXIX. Inflammation of the Liver.

§ 1. It is cured in a manner as an Inflammation of the Stomach : purging and altering things are to be given in the begining of the Disease : afterwards cooling, cleansing and opening Julebs, not made too sweet, because sweet things inflame the Liver : here are useful Barley water, Decoctions of roots of Smallage, Fennel and Parsly : leaves of Agrimony, Coltsfoot, Maidenhair, with a little Liquorice and Syrup of Maiden hair, which may be used as ordinary drink : Afterwards give Turpentine washed in Parsley water, three four or five times, for that takes away the reliques of the Disease. § 2. In the interim you must often give emollient, cooling and lenitive Clysters, such as that in cap. 30. sect. 27. § 2. foregoing. § 3. Outwardly you must apply Topicks during the whole time of the Disease : in the beginning thereof Epithema Hepaticum ; but if there is a Feaver then use Epithema Cardiacum : Or you may anoint with Unguentum Rosatum, or Galens cooling Oyntment : but Repellers ought to be gentle, least the passages of the Liver being too much straitned, an Obstruction be caused : or by too much cooling, a Scirrhus be bred : or the quittor issuing from the Inflammation be cast back into the Liver : They ought also to be gently astringent, and mixed with such things as are opening and absterfive. § 4. In the height or declination of the Disease, when the Feaver and pain decrease,

you must mix dissolvers with coolers, as R^x Oyl of Roses ʒij. Oyl of Wormwood ʒj. Oyl of Camomil ʒss. powder of the three Sanders ʒj. spicknard ʒss. Wax q. s. make a Liniment : Or R^x Oyl of Mercury ʒj. Saccharum Saturni ʒijss. Oyl of Galbanum ʒss. red Wax of Cinnabar q. s. these mix with Mistleto of Juniper or juyce of Coltsfoot, or Galbanum. Or R^x Barley Meal, Oyl of Roses, A. ʒij. red Saunders ʒij. with juyce of Endive and Succory make a Cataplasim. § 5. In the declination or end of the Disease, when the Feaver is gone, you must mix dissolvents with emollients, least any hardness should remain ; to which you may add some astringents to strengthen the part. R^x roots of Althæa, leaves of Mallores, Violets, Agrimony, A. M. j. Wormwood common and marish, A. M. ss. Cypressroots, Acorus, Annise, Fennel, Fœnugreek, Linseed, A. ʒss. flowers of Camomil, Mellilot, Dill, A. P. j. Spicknard, Schœnanth, A. ʒij. make a Decoction, and foment the parts with it. Or, R^x Oyls of Camomil, Lillys, Almonds, A. ʒj. Oyls of Wormwood and Spike, A. ʒss. Pouders of Schœnanth, Wormwood, A. ʒij. Wax, Gum Ammoniacum (dissolved in Vinegar) A. q. s. make a Liniment. Or R^x Gum Ammoniacum (dissolved in Vinegar) ʒj. Labdanum, Mastich, A. ʒij. Oyl of Wormwood, Wax, A. q. s. make a Plaster, which spread upon Leather, cut like a half Moon. § 6. If the Inflammation will not dissolve but tends to suppuration, known (according to Hippocrates, lib. 2. Aph. 47.) by the increase of the

the Feaver and of the Pain, there is great danger, and few escape : yet you may farther the suppuration with things proper, and emollient Cataplasms : inwardly you may give Decoction of Althæa, Mallows and Figgs in Chicken broth. § 7. The Aposteme being broken, if white matter comes forth by Stool or Urine, you must cleanse with Barley Water or Whey, sweetned with Honey of Roses, and such things as are for an Ulcer of the Stomach, which see at Sect. 28. Goats Whey drunk with an Emulsion of the four cold seeds and Honey of Roses is much commended. § 8. If the suppuration tends outwardly, so that the matter falls into the Cavity of the Belly, you must proceed to Burning and Incision, viz. open it with a red hot Incision Knife, as Hippocrates has advised : and then if the matter comes forth white and concocted, there may be hopes of Cure : but if red or black, filthy and stinking, the sick will certainly dye. § 9. If the Inflammation is in the Gibbous part, things which move Urine are far more profitable than purging Medicines ; but if in the hollow part gentle Clysters may be exhibited, but you must beware of Purgers given by the Mouth.

An Appendix concerning the Distemper of the Liver.

§ 10. Distemper of the Liver is four fold, viz. either hot, moist, or dry, and these are again either without matter, or with matter.

§ 11. A hot distemper simple or without matter : The Signs are

declared in lib. I. cap. 40. sect. I. foregoing, from Galen : to which you may add loathing of Meat, and most of all of flesh, a vehement thirst, binding of the Belly, great heat in the whole Body, especially in the Palms of the Hands, and soles of the Feet : leanness of the whole body, and a dryness of the Belly, the sick being the worst for hot things and the better for cold. It is caused by too hot Air, immoderate Exercise, Anger or great passions of the Mind, drinking too much of hot Liquors as strong Beer, Wine, Brandy, &c. It is cured by coolers, as Roots of Dandelion and Straw-berries : leaves of Endive and Succory, Seeds of Sorrel, the greater and lesser cold Seeds : Woods of Sanders : Fruits as Cherries, Currans, Straw-berries : Syrups of Corals, Strawberries, Sorel, Citrons, Succory : Salts of Corals, Pearls : Powders Diatrion Santaloni, Diarrhodon abbatii, Diamargariton frigidum : Mynsicht his Niter Vitriolate. For Topicks these are good, a Cerate of Sanders, Saccharum Saturni, Oyl Omphacine, or this. R water Lillys, Hen-bane, Plantane, flowers of White Lillys, A. ʒi. ss. Saccharum Saturni, Camphir (dissolved in S.V.) A. ʒj. Sal prunelle ʒss. Gum Tragacanth q. s. mix, and apply it to the right Hypochondry. § 12. A hot distemper compound, or with matter. It is known by the former Signs, together with a bitterness in the Mouth, a Feaver either slow, or errattick, or an intermitting Tertian, and if there is plenty of humors, a Vomiting and purging of Cho-

Choller, first thin, then thick yellow and stinking. It is caused from Choller either generated in the Liver, or sent from the Bladder of the Gall, laboring under obstruction, or derived from some other part. It is cured *first* by Revulsion, Cupping with Scarification, Frictions, Ligatures: and by Derivation with Laxatives. *Secondly*, by Evacuation either by Stool, where Syrup of Roses, of the leaves of Rhubarb and Tamarinds: Or *Diacatholicon*, or the Infusion of *Sena* and Tamarinds, or *Cassia* and other cooling Purges take place; Or by Urine, where Decoction of Grass roots, Barley water, Whey, &c. are commended. Or this: *Rx new made juyces of Endive, Succory, Sorrel, Fumitory, Borrage, Bugloss, Pearmain, A. thj. clarify them and infuse therein choise Sena ℥viij.* Dose four spoonfuls every Morning. *Thirdly* by cooling and strengthening the Liver. This may be done with Oyls of Vitriol, Sulphur and Salt, *Lapis prunelle* given *ad ʒj.* Tincture of Roses, The Alexandrian Juleb, made with an equal part of juyce of Limons, The aforementioned juyces Clarified, Conserve or Marmalade of the Hips of the Canker-Rose, which is an excellent thing, Syrup and Tincture of coral made with juyce of Limons, giving two spoonfuls every day; Whey made of boyling Milk by putting to it juyce of Limons or Syrup of Vinegar, as *Amatus Lusitanus* advises, and taking of it for fifteen or twenty days together: Vitriolick Mi-

neral Waters, &c. If the sick is Lean or Consumptive, give Milk alone, especially Ases Milk, le-
vigated Powder of Coral, Deco-
ction of China prepared with
Spring-water, and a 20th part of
juyce of Limons; and often use
a Bath of warm Water, for that
doth powerfully cool & moisten
the Body. The Blood of Succory
and Germander is a specifick in
this Disease, and is thus made:
Rx succory Water made in B.M.
q s. leaves of Succory p.ij. of Ger-
mander p. j. infuse and digest toge-
ther in B.M. for three days; then
strain, and add to the Liquor fresh
Succory & Germander, digest again
three days and strain; this manner
of Infusion repeat for ten times, so
will the Liquor turn red like
Blood: this with its equal quanti-
ty of white Sugar, you may make
into a Syrup. § 13. A cold Dis-
temper simple without matter.
The signs see in lib. 1. cap. 40.
sect. 2. to which add, a very
great desire of eating, no thirst,
voiding of stegmatick crude and
thin matter by Stool, &c. The
cure is difficult, because it is
more repugnant to the office and
nature of the Liver. It is per-
formed by Alteratives, as the
Roots of Burnet, the true Aco-
rus; leaves of Wormwood, A-
grimony, Centory the less, Ber-
tony, Rosmary, Sage, Maiden-
hair, Raisons, Cloves, Nutmegs,
Mace, Cinnamon, Pepper, Xy-
loaloes, *Mynsichts* Tincture of
Cassia Lignea, Treacle, *Mithri-*
dare, *Morsulli Mechoacanna*, *Re-*
lule Imperiales Mynsichti, *Dis-*
margariton Calidum, &c. § 14.
A cold Distemper with matter. It

is known by the former signs, the white colour of the Face and of the whole Body, a soft habit of Body, flegmatick stools, and a heaviness in the right Hypochondry. The Cure is according to the Method of the former wherein an evacuation of the matter by Phlegmagogues ought principally to be followed; then strengthen with Hartmans Essence of Mars, &c. § 15. The moist distemper is cured by dryers: the dry distemper by things which moisten, &c. The signs see in lib. I. cap. 40. sect. 3. and 4.

XL. Scirrhus of the Liver.

§ 1. The Cure of this Disease is performed, 1. by taking away of the antecedent cause. 2 by dissolving the conjoynd Cause. § 2. The Antecedent cause is taken away by things which alter and open, such as we have prescribed in the cure of an Obstruction of the Liver,, and by things which gently empty. Tartar Vitriolate with Raisons, Cinnamon, and leaves of Agrimony, are commended, so also things which work by Urine, as washed Turpentine, mixt with equal quantities of white Sugar, and taken ʒj or ʒjss every Morning for thirty or forty days, for it opens, provokes Urine, and loosens the Belly. § 3. The discussion of the conjoynd cause is done by the Pilulæ de Ammoniaco Quercetani, Tartaræ Bontij. Or this, Take Ammoniacum (dissolved in Vinegar) ʒij. Bdellium, Storax, A. ʒiv. mix for Pills: Dose ʒj every other day. Or this which has a wonderful Vertue in dissolving of a Scirrhus: Take fine Aloes, Gum Ammoniacum, (dis-

solved in Vinegar) strained and inspissated, A. ʒjss. Mercurius dulcis ʒij. Diagredium ʒj. Oxymel of Squils, q. s. make Pills: Dose ʒjss. four hours before Dinner for thirty days together. Siceel prepared and opening Crocus of Mars are said to be specifics. § 4. Outwardly use an emollient and Discussive fomentation Morning and Evening; and if the Scirrhus is great, you may add to it, Flower-de-luce, wild Cucumber and dwarf Elder Roots, and make the Decoction in Tripe Broth and White Wine, then anoint with this, Take Oyls of Camomil, Melilot, Roses and Wormwood, A. ʒj. Gum Ammoniac (dissolved in Vinegar ʒiij. mix them. Or, Take Unguentum de Artanita ʒvj. Gum Ammoniac (dissolved in Vinegar and Inspissated) ʒss. mix and anoint therewith, it is a powerful thing. Fabricius Hildanus his Oyntment of Hemlock is commended; so also a Cataplasim of the leaves of Henbane in Vinegar mixt with Oyl of bitter Almonds, and Baths of emollient and digestive things: after apply Emplastrum de Meliloto compositum, or Ceratum de Ammoniaco Forresti: or Emplastrum de Galbano Crocatum Mynsichti: Or Labdanum with Indian Balsam and Wax; or Emplastrum de Cicuta cum Ammoniaco which is an excellent thing. § 5. Lastly, part of the Morbifick matter may be drawn away by an Issue in the right Leg. § 6. Observations. A Maiden thirty years of Age, Melancholly had a Scirrhus three years, and to be felt outwardly as big as four times

times a Mans fist doubled: after she had for a long time tryed many things in Vain, we cured her only with a Decoction of Juniper-berries in water: she drunk a quart or three pints a day, every day for a year together. *Zacutus Prax. lib. I. obs. 41. saith,* That a strong Scirrhus was cured by the use of Conserve of Horehound for forty days together.

XLII. Ulcers of the Liver.

§ 1. It is cured as an Ulcer of the Stomach, at sect. 28. It is a Disease wherein is but little hope, yet ought it not to be neglected, for then it will grow foul, by a perpetual afflux of filthy matter.

§ 2. Things cleansing must be given as we have advised at sect. 39.

§ 7. Moreover Parsly water lbj. mixt with Salt of Tartar ʒj. and sweetned with Honey or Sugar of Roses is an approved thing.

§ 3. The Ulcer being cleansed, you must heat and dry it, by things moderately astringent, and strengthening the Liver. § 4. If it degenerates into an Hæbick or Consumption, you must have respect to the Cures of those Diseases.

XLII. Atonia, Weakness of the Liver.

§ 1. The Cure is done by things strengthening the Liver which are appropriate, as the Liver of a Wolf, of a Calf, of Bull, Hens, Cocks and Capons Livers, Snails Raïsons, Curans, Decoctum Hepaticum Quercetani, &c.

§ 2. If the sanguifying Faculty is hurt by means of a cold Distemper, you may use Rupert Cranes bill bruised; a lye of the Prunings

of Vines made with Wine: and things which open Obstructions and provoke Urine. § 3. If by means of a hot distemper (wherein the Excrements are like to the dregs of Blood;) you must cool, and evacuate with coolers: after give Whey with astringents.

XLIII. The Dropsy Ascites.

§ 1. It is cured by emptying the water (the body being prepared if filled with many tough, thick, and viscus humors) first, by Stool, with things which purge water: the milder are Mechoacan, Jal-lap, juyce of Flower-de-luce clarified, which may be given ad ʒiij. with Syrup of Endive ʒvj. Parsly water ʒls. Diarrhodon ab-batis ʒj. with Peachflowers dried and boyled in wine, Tinctura Phleg-magoga, & Hydragoga Grulingij: The stronger are Cambogia given à gr. vij ad xvj. Extract of Esula, Trochiscs Alhandal, Spiritus Vitæ aureus Rulandi, Extract of Elaterium, Rosin of Jallap, Pills le Lunares, or the Crystals of Luna of Tentzelius given at the Wain of the Moon ad gr. v. Mercurius Vitæ fixt by long digestion, Crocus Metallorum Absinthiacus Myrsichii; his Sal Tartari Emeticum; all which things ought to be given with discretion, not too often, least the Bowels should be too much corrupted; which you ought to strengthen in the intermediate days. § 2. Secondly, by Urine; you ought to exhibit Diureticks, but after purgers of water have gone before; among which those things of most eminent note, the Ponder of Earthworms given ad ʒj in Decoction of Asparagus

or

or Fennel or Persicary water : Salt of Ash : Lixivium of Beanstraw in White Wine. Or this, *R. Ashes of Beanstraw M. vj. of Broom and Juniper; A.M ijs. of Woodbine M. js. of Eggs/hels M. j.* make a weak Lixivum in Rhenish Wine : Dose ζ vi. The juyce or Decoction or Infusion of Winter Cherries in White or Rhenish Wine, is powerful in this Case : so also the Infusion of Mustard-seed \mathfrak{h} j in the same Wine \mathfrak{h} ij. § 3. Thirdly, by Sudorificks and Dryers, as the Root of Swallow-wort steeped and boyled in Wine : *Tinctura Diaphoretica Paracelsi, Spiritus salis Armoniaci, Antimony Diaphoretick, Bezozar Mineral, Decoction of Sassafras-wood, Treacle ζ ls.* dissolved in Rhenish Wine, with a few drops of Oyl of Sulphur, *Decoctum Sudorificum Empirici Germani Lapis Serpensis* by the direction of Joel : outwardly anoint with *Unguentum de Artanica*. § 4. The next thing to be done is to strengthen the parts weakened, that the water may not be collected again, for which you may give *Trochisci de Absinthio*, Confect of Cubebs, *Elixir Proprietarii*, Pouder and Extract of Rhubarb. § 5. Lastly, You must order a constant astringent, drying, and strengthening Diet.

XLIV. The Dropsy Tympanites.

§ 1. The cure consists first in bringing forth the Morbifick matter and Wind; where the aforementioned Infusion of Mustard-seed in Wine is a singular Experiment ; so also, if in the same be a little Cambogia : and there is com-

mended the coagulated Spirit of Salt, with Wormwood water and Spirit of Elder. § 2. Secondly, by Discussion of the Wind, Inwardly, by Decoction of Ebony-wood, Decoction of Guajacum, spirit of the same, Powers or Quinifences of Caraways, Cumin, and Juniper-berries, Liquor of the flowers of Mullein, *Tinctura Diaphoretica Paracelsi*, and the Sudorifick Decoction of the German Emperick. § 3. Outwardly, by a great Cupping-glass applied to the Belly; by Frictions with Garlick or Onions, bruised and boyled in generous Wine : by a fomentation of Boys Urine in which *Sal prunellæ* is dissolved, and by anointing afterwards with *Unguentum de Artanica*. § 4. Thirdly, by correcting the distemper of the Bowels and strengthening them, by things gently astringent and drying, and opposite to the Intemperature afflicting, whether it be hot or cold.

XLV. The Dropsy, Anasarca, called Hypofarkidion and Leucophlegmatia.

§ 1. The cure is by emptying the watery humor dispersed throughout the Body by things which evacuate, first by Stool, (the body being prepared with an aperitive Decoction with Diacassia) giving *Pilule Hydragogæ*, or those of Bontius; after you may exhibit *Enema Catminativum Mynsichti*, or an emollient Clyster with Tincture of Colocynthis ζ j. Or you may Vomit with *Kinum Benedictum*, and after exhibit the aforementioned Clyster. The Salt Extract, or Essence of Hedge-Hyssop, made into Pills with

Co-

Colocynthis and Mechoacan is commended, or mixt with Rhu-
barb. § 2. After these Evacua-
tions the sick is to sweat with Spi-
ritus ex tribus, Antimonijum Dia-
phoreticum, Bezoar Mineral, and
such like, that the remaining part
of the watery humor may be
wasted and discuffed, and these
sweats are to be repeated often
and by intervals: the Decoction
of Swallow-wort, and of Gua-
jacum, or the Spirit thereof are
of good use; so also Sweating
in Hartmans Chair with recti-
fied S.V. Or a Laconick Bath,
taking before the enterance
thereinto Spirit of Angelica, Or
Tinctura Diaphoretica Paracelsi.
§ 3. If there are very great Ob-
structions, you must open and expel
Wind with Quintessences or Pow-
ers of Cloves, Anise, Caraways and
Juniper-berries, Spirit and Tin-
cture of Tartar or Spirits and
Oyls of Vitriol, Salt or Sul-
phur: after you may give Gum
de Peru à gr. vj ad xvj with Cream
of Tartar and Colocynthis; or
you may purge often with Dia-
jallapa, Diaturbith, Diagamba, or
Pilule Panchymagoga. Crystals
of Luna are a specifick in this
Case, especially if used with a
diet of the Emperical Ger-
man Decoction Sudorifick.
§ 4. Strengthen the Bowels but es-
pecially the Stomach and Liver
with things proper thereto being
gentle astringents and dryers.
§ 5. An Observation. Horatius
Reservus saith, That he has cured
many Boys, and some Women
of an Anasarca, with this Sudori-
fick Syrup of St. Ambrose called
Luminare majus. Its description

is thus, in an old Dispensatory:
℞ Gromwell seed, husked ℥ij
spring water ℥ss. boyl till ℥iv. on-
ly remain: strain and mix it with
as much Sack, and give it warm:
it sweats powerfully, if the sick be
well covered.

XLVI. Inflammation of the Spleen.

§ 1. It is cured altogether as an
Inflammation of the Liver, and other
Inflammations, so that larger drink-
ing after purging be avoided, 1. all
the humour be carried to the
substance of the Liver. § 2. You
must often give spirit of Sal Am-
niack in some proper Splenetick Ve-
hicle, and apply the Topicks men-
tioned in the Inflammation of the
Liver, to the left side. § 3. You
need not be so careful in the use of
astringents outwardly, because the
Spleen is not so noble a part, and
needs less strengthening.

XLVII. Scirrhus of the Spleen.

§ 1. The Cure of this Disease is
the same with the Cure of a Scirr-
hus of the Liver at sect. 40. afore-
going, and the same Medicines
may take place. § 2. To those
things there enumerated you may
add as specificks, Galliopsis, urti-
cainers, Archangel or Dead-net-
tle, ℥i boyled in Wine, or ℥j of
it in Pouder, as commended by
Fonseca and Solemander: the Ita-
lians call it the Spleen-herb;
The root of Fern, Wood of Ta-
marisk boyled in Steel water to
a third part. Or this: ℞ Fern
roots ℥j Dodder of Vetches ℥ij Rhe-
nish Wine ℥viij boyl to the Con-
sumption of ℥ij. Or this of Ri-
verius which he saith will cure,
if it be curable: ℞ Gum Ammi-
niacum, Opoponax, Bdellium, ʒi.

3ij. dissolve in White Wine, strain and boyl; then add Confectio Hammech, Diaphœnicon, Pulula fœtida, A. 3ij. double Catholicon 3ls. Mercurius dulcis 3iv. mix for four Doses: let it be taken many days together and the Tumour will vanish. § 3. Outwardly, foment with a sponge dipt in Time-water, then anoint with this: R Oyl 3vj. Ox Marrow 3ij. fresh Butter 3j. juyces of the roots of Bryony and wild Cucumers, A. 3iiij. boyl till the juyces are almost consumed; then add Wax 3ij. Powder of Ceterach, Caper and Tamarisk-Bark, Agnus castus seeds, A. 3ls. mix for an Oyntment: with it Amatus saith, He cured a Scirrhus of the Spleen. Fabricius commends this Oyntment, R Gum Ammoniacum 3j. Oyls of Sweet Almonds, White Lillys, Hensgrease, A. 3ij. juyce of Hemlock 3iv. Vinegar of Squils 3ij. make an Unguent and anoint with it; after apply a Cataplasim of Sowr leaven boyled in equal parts of Wine and Oyl to a thickness: Or this, R roots of wild Cucumers 3bj. Mallows, Violets, A.M. j. boyl till they are soft, beat and strain, and with Oyls of Capers and Tamarisk and Vinegar of Squils, A. q. s. make a Pulvis. Lastly, apply over a Plaster of Simple Ammoniacum, Or that & Cicuta cum Ammoniac: Or this, with which Aquapendens saith, He has cured many: R Ammoniacum 3ij. (dissolved in Vinegar) juyces of Tobacco and dwarf Elder, pine Rosin, Turpentine, Oyl of Capers, A. 3j. new Wax 3ls. mix and make a cerate according to Art.

XLVIII. Pain of the Spleen.

§ 1. Exhibit Enema Carni-nativum Mynsichti: then purge with Lenitives or other things, mixt with proper Spleneticks. § 2. Foment the part with Oyl of Juniper-berries, mixt with Oyl of Amber and sweet Almonds, and Vinegar of Roses, A. q. s. And if the pain yet remain, apply a Cupping-Glass to the left Hypochondry, if there be no suspicion of an Inflammation, Defluxion, or other Tumour, for then you must forbear. § 3. Because the pain is not exquisite, there is no need of the use of any Narcoticks; the rest of the cure search out in the Section of Hypochondriack Melancholly.

XLIX. The black Jaundice.

§ 1. The Cure of this Disease respects the Cause: if it be by defect of the Bladder of the Gall, there is the greater Corruption of Chollen; and it ought to be cured with those things appointed for the Cure of the yellow Jaundice, with which you must mix Spleneticks. § 2. If it be by default of the Spleen, the Disease is more stubborn, and you may fetch the cure out of sect. 13. foregoing, to which you may add things which dry up and expel Water, because a Dropsy is to be feared, as also such things as open Obstructions of the Spleen. § 3. Preparations of Steel are profitable with strong exercise, as also a dry Bath; after which the Body must be cleansed with Almond-Powder, or an Emulsion of Hempseed: and the Face may be waht with Bean-flower water mixed with Wine.

L. Obstructions of the Reins.

D d d § 1.

§ 1. The Cure hereof is also according to the Causes ; where, if it proceeds of thick viscus humors, you must first empty by Catharticks or Emeticks : then use things Deterfive, Incisive, and Diuretick ; as waters of Parsly and rest-Harrow, with Fernelius his Syrup of Radishes ; Decoction of Winter Cherries in White or Rhenish Wine, Spirit of Salt or Sulphur, Tartar Vitriolate with Julep of Violets, &c.

§ 2. If it be from the Stone or Gravel, you must cure it as we have taught at sect. 14. foregoing.

§ 3. If it comes from a Tumour, viz. a Phlegmon or Inflammation, you must cure it as we shall teach in the next Section. § 4. If it be from clotted Blood ; it is dissolved with Dyers-Madder, Seeds of Cresses, sperma Ceti, Mummy, made into a Pouder, or with Chervil-water mixt with some Drops of Spirit of Sal Armoniack. § 5. If it be from matter, it is cured with Abstersives and strong cleansers, gradually administered.

LI. Nephritis, a Phlegmon, or Inflammation of the Reins, Apostem and Scirrhus.

§ 1. In the Cure of this Disease, you must use Revulsion and Derivation, with such things are moderately cooling, anodyn and discutive. § 2. If the Tumour will not resolve, or be discussed, but apostematates, you must use Suppuratives or Ripners, &c. § 3. Revulsion is made by application of Cupping-Glasses with Scarrification, Emetick Potions, Frictions and strong Ligature in the upper parts. § 4. Derivation is made by an Issue in the Ham or Ankle, or by opening the Hæmorrhoids if swelled,

or by proper emollient or laxative Clysters, as Enema Carminativum Mynsichti, & in Calculo Renum & Vesicæ, & Anodynum Mynsichti. § 5. Inwardly give coolers as this, R waters of Endive, Lettice, Purslane, A. § iv. Syrup of Pomgranates § ij. Syrup of Water Lillys, of Marsh-Mallows, A. § j. Oyl of Sulphur gut. xvj. mix for a Juleb for three draughts Morning and Evening. Or give an Emulsion of the four cold seeds made with Lettice, Purslane, and Poppy water, and sweetened with Sugar of Roses: if the pain be great you may add to it Syrup of Poppies, which is powerful to stop the Fluxion. § 6. After the Inflammation is a little allayed, you may use gentle Purgers ; as Manna, Cassia, Rhubarb, Tamarinds, Diaprunum simple, Catholicon, Cassia with Turpentine, Catholicon and Syrup of Roses, with a Decoction of Lettice, Purslane, and other coolers: but purgers in the beginning of the Disease are dangerous, and increase the Inflammation, therefore to be avoided. § 7. Ourwardly for Topicks, apply (all the time of the Disease) Repercussives, which may cool and repel, as an Epithem of Poppy, Plantane or Nightshade-waters : Or anoint with Unguentum Populeon, or Oyl of Poppy seeds by expression : Or a Liniment made of an Egg well beaten with Oyl and Vinegar of Roses ; all which things apply cold upon a Cloth, and if the pain be very violent, mix therewith a little Opium and Saffron : Or this Cataplasim which is an excellent Anodyn and Discussive: R Crum

of white Bread 1lbj. boyl in Goats or Cows Milk to a Pultise : to which add yolks of Eggs N^o. iij. Oyl of Roses §iv. Saffron ʒj, and if the pain be very great Opium and Camphir, A. ʒss. mix, and remove or change it often. § 8. If the Inflammation will not be cured but Apostemate, which you may know by the increase of the Fever, Pain, Trembling, Vomiting greater weight about the part, and other Symptoms; you must hasten the Suppuration with emollient Cataplasms made of mollifying roots, Herbs and Seeds, with Camomil-flowers, and other things which may ripen, which being boyled may be mixed with Meals, Butter, Grease, or Oyls of the same nature: if with these and the like things the Apostem breaks not suddenly, that the matter may surge forth by Urine, it will get into the Cavity of the Abdomen, whence will come sudden Death, or an Hellick Fever. If it appears outwardly, you must open with an Incision Knife or Potential Caustery. § 9. If it grows hard and degenerates into a Scirrhus, which is known by a pain remaining in the part, a greater sense of weight, and a kind of numbness of the parts (although the Fever be gone.) It is commonly incurable, and brings a Cachexy or Dropsy: yet the Cure may be attempted (if it be thought possible) with such things as we have mentioned in the Cure of Scirrhus of the Liver and Spleen. 10. Lastly, In the Cure of an Inflammation of the Reins, Diuretics are not to be used till the Inflammation is perfectly allayed: and

here takes place Tartar Vitriolate with Juleb of Roses and Cinnamon water, A. ʒij.

LII. Ulcers of the Reins.

§ 1. In the Cure hereof you must use things cleansing and drying, you may first purge with gentle purgers: as Cassia, Manna, Syrup of Roses, Agarick, Rhubarb, made into a Bolus, (not in a Liquid form, because they would quickly go to the Ureters and increase pain:) but they will do much better and be more powerful if you mix therewith *Mercurius dulcis*: which doth cleanse and heal all Ulcers both Internal and External. But above all we commend upon our own experience Turpentine given ad ʒss made up with Pouder of Liquorice, every Morning, for many days together, because it purges, cleanses and heals. § 2. Revulsion is next to be practised, and it is exceedingly commended by way of Vomit, by Avicen, as the best way to cure an Ulcer of the Reins, and this is also confirmed by *Aetius*: *Sal Vitrioli* is excellent in this Case; so also Oxymel of Squills, and if the Sick be a strong and robust body, you may give *Asarabacca* or Antimonials: but if the Sick be hard to Vomit it may endanger an Inflammation of the Ulcer. § 3. After sufficient evacuation and revulsion, you must give cleansers: the chief of which are Whey, drunk in large quantities, thin Hydromel drunk to a pint every Morning, Asses-Milk; (if there be no Fever) and other Milks, Decoctions and Wine of Winter-Cherries; but the Decoction of Parsley, commended

by Doringius, bears away the Palm from all other Medicines.

§ 4. Lastly, to glutinate, dry and heal, you may give Blood of Comfrey, or a Decoction of China, Sarsa, Sassafras, or Guajacum for thirty days together, especially if the Sick is flegmatick, or has the French Pox; Water and Sugar, or a small Decoction of Guajacum for ordinary drink; or an Infusion or Decoction of *Lignum Nephriticum*. Moreover *Trochisci Gordonij* ad \mathfrak{z} ij or \mathfrak{ii} j. are excellent. New Milk from the Cow given every Morning with fine Bole \mathfrak{z} j. is a secret of *Halidaus*; for it cleanses and heals the Ulcer. *Quercetan* commends his *Aqua Terebinthinata*: *Hartman* commends this, & Conserve of Roses p. \mathfrak{ij} . Pouder of *Hypericon-seeds* p. \mathfrak{j} . mixt with gr. \mathfrak{ii} j. of *Mercurius dulcis* in every Dose, and given several Nights together. *Mercurius diaphoreticus*, if well made, cures all Internal Ulcers, miraculously: and *Garcias ab Horto* saith, That in Goa, they give Aloes and Milk for Ulcers in the Reins and Bladder, or to such as piss matter, and it cures presently. These Pills also are commended: R washed Turpentine \mathfrak{z} j. spanish juyce of Liquorice, Gum, *Tragacanth*, A. \mathfrak{z} ij. fine Bole, *Trochisci Alkakengi*, A. \mathfrak{z} ss. juyce of Horsetail q. s. make Pills: Dose \mathfrak{z} j. Morning and Evening. § 5. Inwardly, you may give Syrup of Poppies, Laudanum, *Philonum Romanum*, *Confectio Anodyna*, *Liquor Vitæ Anodynus*, *Trochisci Alkakengi*, Emulsion of the cold seeds, and white Poppy-seed, with Sy-

rup of Poppies, or Conserve of Marsh Mallows; as also all Mineral Waters, chiefly of Alum and Iron, because by their constant use the Ulcer is corrected, cleansed and healed.

LIII. Inflammation of the Bladder.

§ 1. It is cured as an Inflammation of the Reins, at sect. LI. *aforegoing*, and with the same Medicines; but this is to be observed, That repellers or astringents and coolers are not to be long applyed, because the Bladder is Membranous, and so is easily bound up, by which the Urine is supprest, and the Nerves hurt. § 2. *Cataplasms* are here less necessary than Oyntments, because they burthen the part, whereby it cannot so easily dilate it self: you may anoint with a Liniment of Oyl of Lillies and Oyl of Camomil with a little Camphir. § 3. If there is danger of a Gangreen, you must strengthen with a Cataplasm of Meal of Beans, Lupins, or *Orobis* boyled in Wine, to which is added at last, a little Spirit of Wine. § 4. If the Fever, pain, and watching be vehement, you must evacuate and alter for the relief of the sick, as also apply cooling Epithems and Liniments to the Liver, Heart, and Brain: and if the pain is vehement, you must give Narcoticks both by Mouth, and Clyster. This is excellent: R S.V. \mathfrak{z} xvj. *Gentian*, *Zedoary*, A. \mathfrak{z} j. infuse ten days: then dissolve in the *Liquor Thebian* *Opium* \mathfrak{z} ss. after ten days more; decant the clear *Liquor*: Dose à gut. xx ad xxx. or more in Canary: by Clysters you may give almost a spoonful of it: § 5.

§ 5. If a Strangury or stoppage of Urine follows, you must cure the same, as in the proper place we have taught.

LIV. Ulcers of the Bladder.

§ 1. These are also cured as an Ulcer of the Reins at sect. LII. foregoing: but these things following are particularly to be observed.

§ 2. First that in an Ulcer of the Bladder it is proper to make Injection twice, thrice, four times, or oftner in a day: First with Hydromel or Whey, or Decoction of Barley with Honey of Roses to cleanse: then with astringents, as Iron water in which Comfrey-roots, Myrrh, Alum, Sarcocol and Tragacanth have been boyled, or with Trochisci Gordonij dissolved in Milk: Or with this of Fabricius Hildanus in Cent. 3. obs. 69. R roots of Comfrey ℥j. Agrimony, Veronica, Scordium, Sanicle, Ladys Mantle, A.Ms. boyl to a pint, strain, and dissolve therein Honey of Roses ℥ij. But our Aqua Ophthalmica, transcends all things of this kind, which may be sweetned with Honey of Roses, see it in Our Pharm. lib. 5. cap. I. sect. 14. § 3. Secondly, that Injections are not only made with a Syring, because that will not enter into the Cavity of the Bladder, the Sphincter Muscle being shut: but it must be conveyed in with a Catheter. See the Cure of this Disease more at large in cap. 26. sect. 29. of this Book.

LV. Incontinency of Urine.

§ 1. The way and manner of curing of it (chiefly in Children) we have taught in cap. 22. sect. 18.

§ 6. of this Book. But these

these following things are more-over to be observed. § 2. First, That since the Disease comes from a cold and flegmatick distemper of the Body, and of the part; you must always give things that purge flegm, mixed with astringents, as Rhubarb, Myrobalans, Agarick, Tinctura Phlegmagoga & Hydragoga Grulingij, Gutta Gambæ, &c. § 3. Secondly, That after sufficient purging, you must give things which dry, astringe and strengthen, to which, besides those mentioned in the place aforesaid, we add these following: Galen commends the Brains and Stones of a Hare burnt; also a Snail, and its shell burnt, and given to Drink: others commend Haresdung, Powder of burnt Mice, Hogs-hoofs burnt, Ashes of Dates, stones, roasted Hazle Nuts, Powder of Egg-shells: but above all the Powder of Agrimony given in Red Wine. Or this, R cypress nuts, Myrtles dried at the fire, shavings of Ivory, Corriander seeds, red Coral, Amber, A. ℥ij. Spodium or burnt Ivory ℥j. Cypress roots, Galingal, A. ʒss. with Syrup of Citrons, make an Electuary: Dose the quantity of a Chest-nut, Morning and Evening, drinking after a little Red Wine. § 4. Thirdly, That in those of ripe years sweating is profitable: and sweating Decoctions used twenty or thirty days together (made of Sassafras, and Guaiacum) are very profitable to dry the Body, by which also the Serum is derived another way: A dry Bath, or Sweating in Harman's chair with S.V. or Baths of Sulphur and Niter to wash and sit in are much commended.

§ 5. Fourthly, That their drink be drying and astringent, as sharp Red Wine without mixture, or with a little Chalybeate Water: Or Chalybeate water alone, or boyled with Coriander-Seed and Mastich: Or Water in which new Tiles have been quenched, drinking also but little, chiefly at Supper. § 6. Fifthly, That the sick be made to make Water at going to bed; then raised at Midnight, and in the Morning, also for the same purpose, that thereby the custome of Pissing might be altered.

LVI. Pissing Blood.

§ 1. The Cure of this Disease is various, according to the variety and nature of the causes. If it comes from sharpness of Blood, you must alter its quality, and make Revulsion, afterwards Derivation. Revulsion is made by Cupping, Frictions and Ligatures in the upper parts, and if the flux is violent Cupping-Glasses are to be applyed to the Hypochondria. Derivation is to be made by opening the Hemorrhoids if they swell: and you must alter by things which stay Sharpnesses, Saltiness and Acidity, of what kind are all Alkalies, principally Prepared Coral and Pearl, Tinctures of Coral, Antimony, and Salt of Tartar. § 2. If it be caused by a Cholerick humour, evacuate with Extract of Rhubarb, or with this, R Ponder of Torrified Rhubarb ℥i. prepared Coral ℥ss. Goats Whey ℥iij. mix for a Portion. Or, R pulp of Cassia ℥ss. pulp of Tamarinds ℥vi. fine Bole ℥ss. mix for a Dose. § 3. Due evacuation and revulsion being

made, you must give things to stop the Flux, and conglutinate the Veins: such are juyce of Plantane, given ad ℥iv or v. Morning and Evening, juyce of Nettles in the same Dose and manner: juyce of Yarrow with the white flower, juyce or Decoct. of Knotgrass, Purslane, Bramble-tops, unripe Bramble-berries, juyces of sharp Pomgranates or Quinces. § 4. If these things do nothing, you must give things to thicken the Blood and cool it, as Sal Prunellæ, Troches of Winter-Cherries, most cooling Herbs, and Narcoticks, Syrup of Poppies which is an approved thing, Pouders of red Coral, Lapis Hematitæ, fine Bole, Terra sigillata, &c. after the use of these things, you may gently evacuate again with Decoction of Myrobalans in Whey: then give Trochisci Gordonij vel de succino in Plantane water at Night: or the Tincture of Emeralds; or the Arcanum of Agrimony and Cinkfoyl. § 5. If clods of Blood be retained in the Bladder, give warm Water and Vinegar: Or Parsly-water with some drops of spirit of Sal Armoniack: and let the ordinary drink of the Sick be Infusion of Mastich-wood in Wine. § 6. As for Topicks, foment the Reins with things which cool and astringe, or anoint the Loyns with Unguentum Populeon or Comitisse mixt with refrigerans Galeni, ana. or with Unguentum adstringens, and let the Sick wear a Plate of Lead about the Reins. § 7. If it comes from the Stone or Gravel, you must cure it as you cure those Diseases. Pills of Turpentine with

with Rhubarb, given ʒss every Morning with ʒj of Syrup of Scurvy-grafs or Water-Cresses, are very good : so also a Decoction and Wine of Winter-Cherries given alone, or in an Emulsion of the four cold Seeds; as also Vitriol waters, which stop the Blood, cool the Reins, and expel Stones.

LVII. Pissing matter, and hairs.

§ 1. This proceeds either from an Ulcer of the Reins and Bladder, and then you must cure it as we have taught in sect. LII and LIV.

§ 2. Or by default of the Ureters, and then you must use cooling and cleansing things : among which Turpentine, Oyl of Sweet Almonds and Emulsions of the cold Seeds are chief : to which add Infusion, Decoction and Wine of Winter-Cherries. § 3. If it be by default of the Urinary passage, or of the Spermatick Vessels, and the Parastatæ, where it comes forth sincere, you must use dryers and astringers opposite to the Intemperature, which may strengthen those Vessels : The white Potion made of Turpentine, the yolk of an Egg, and Plantane water is commended in this Case. § 4. If it be by default of the Stomach, Liver or Kidneys, wherein the matter is accurately mixt with the Urine : you must rectify the Distempers, and hurts of those parts, as in their proper places we have declared. § 5. If it be a Trichiasis, or a pissing of Hairs, sometimes things like thin leaves, with a mucous matter, caused by a viscosus Flegm, dried and knit together in the Veins by heat,

and extended by reason of its long passage through the narrow Veins of the Kidnies and Ureters : you may remedy it by giving Spirit of Turpentine with Syrup of Marsh Mallows.

LVIII. Pnumatocele, A windy Rupture, or Hernia Ventosa.

§ 1. You are first to open the Vessels with aperitives, among which Volatile Salt and Spirit of Sal Armoniac given in some appetitive Decoction or Wine is much commended. § 2. Then give gentle purges mixt with Carminatives, which may evacuate the Morbifick matter, and discuss the offending Wind : Electuary Lenitivum given ad ʒjss. with Powers or Quintessence of Juniper-berries, or Caraways ʒj is excellent to purge with : so also Benedicta Laxativa with the Potestates Caryophyllorum ad ʒij. § 3. Exhibit Carminative and Discussive Clysters such as Enema Carminativum Mynsichti : Or this, R flowers of Camomil and Melilot, tops of Dill, Parietary and Rue, A. Mss. seeds of Anis, Fennel, Cumin, A. ʒss. make a Decoction, to one part ; in which dissolve Diaphænicon ʒss. Turpentine, (dissolved with the yolk of an Egg) ʒi. Oyls of Dill and Scorpions, A. ʒiij. mix for a Clyster. § 4. Outwardly apply a Cataplasm of Bay-berries, Meal of Fœnugreek and Beans with Bran, Powder of Cumin seed, Ammoniacum, Turpentine, Oxy-mel and Oyl of Bays, Ana. mixt well together ; the part being first anointed with Oyl of Amber : when the Cataplasm is remov-

ed, apply our *Emplastrum ad Herniam*, made of an Ox gall.

LIX. Hydrocele, A Watery Rupture, or Hernia Aquosa.

§ 1. It is cured First by prohibition, that the watery humour be not generated, or flow thither: Secondly, by emptying the water fallen thither either insensibly, for which purpose the Cataplasma in the former section at § 4. may serve; Or sensibly by opening of the Cod.

§ 2. If this Disease be accompanied with a Dropsy, then the whole Cure must be directed against the Dropsy, with resolving, drying, and discutient Medicines, often repeated: *Pareus lib. 8. cap. 18.* advises to anoint with *Unguentum Comitisse* mixt with an equal quantity of *Deficatum Rubrum*.

§ 3. If it be without a Dropsy, yet you ought inwardly to give things which evacuate water as *Tinctura Hydragoga*, & *Phlegmagoga Grulingij*: outwardly you must apply discutients and dryers: if the Body be bound exhibit *Enema Emolliens Schroderi*. § 4. But if the swelling by reason of the great quantity of water, will not yield to these remedies, you must come to Chyrurgery. The Cod and Membranes wherein the Water is contained, must be thrust through with a Seton with a Skean of Silk, you must thrust the Needle presently through the holes of the Mullet made for this purpose, not touching the substance of the Testicles. The Skean of Silk, must be left there, and removed twice or thrice a day, that the humour by little and little may be evacuated. But if by reason of the

Seton, the pain is vehement, and Inflammation come upon it, it must be taken away, and neglecting the proper cure of the Disease, you must have regard to the Symptoms. § 5. Now some Artists use not a Seton, but with a Razor or Incision Knife, they open the lower part of the Cod, making an Incision about half a fingers breadth long, penetrating even to the contained water, always leaving untouched the Substance of the Testicles and Vessels: this Wound they keep open till the Water is evacuated; by this only way, the Cure of a watery Rupture, whose matter is contained in a Cistna, is safe and speedy.

LX. Sarcocoele, Hernia Carnosa, a fleshy Rupture.

§ 1. This is cured by repression with repellents and dryers: the Powder of the roots of rest-Harrow is commended: so Powder or Essence of Leaves of Cranes-bill or Doves-foot.

§ 2. But several Authors affirm it cannot be cured without Cutting, being either Scirrhus, in which there is neither heat nor pain: or Malignant and Cancerous, in which there is a pain and great pricking.

§ 3. In a Scirrhus Hernia, you may give the things just now enumerated: the Powder of Rest harrow ʒj at a time in Wormwood Wine for four or five Months together; then apply upon the part *Emplastrum de Galbano* *Crocatum Myrsichis*, Or *Ceratum de Ammoniaco Foresti*, or *Emplastrum de Meliloto Compositum*, or de *Ranis cum Mercurio*: and make an Issue on the Inside of the Thigh, four fingers

gers bredth above the Knee. *Scultetus* saith, That the Poudre it self hath cured many: If these things do not, you must come to cutting. § 4. First, make a little Orifice in the upper part of the *Scrotum*, through which by the help of Pledgets let suppurating Medicines be applied: and so if possible waste the flesh every dressing, wiping away the matter, but not all, that the flesh may be the better consumed. § 5. If this prevail not, some advise to a Caustick, applying it not only there, but also to several parts of the *Scrotum*, and so waste it that way. § 6. If this does not, make an Incision in the Cod, even to the Tumor, take hold of the string of the Stone, then separate all the Tumid Body, viz. the Testicle from the Cod, and draw it out as far as you can; after fasten a Silk string or Thread above the Tumour strait by the process of the *Peritonæum*, once or twice about, and pass both ends of the Silk through the Orifice it self, that that which was on the right side may be on the left, and contrariwise, then tying it of a fast double Knot, cut off the whole stone: let both ends of the Silk hang out of the *Scrotum*; and Cauterising after Cutting: Or applying a Repercussive to the Wound and adjacent parts, with convenient Ligature, heal it up according to Art. Let the Silk string or thread be tyed as near to the Tumour as may be; least many inconveniencies follow; for the higher the process of the *Peritonæum* is perforated, the thicker it is: so that suppu-

ration being retarded, Convulsions may follow, and threaten Death. § 7. Circocèle or Hernia Varicosa, is cured first by purging away the Melancholy humour for some considerable time, as five, six or seven Week;: then using things drying, and hanging the stones in a truss, a dissolving Plaster being put upon them. § 8. If this effects nothing, you must come to Cutting. Make an Incision in the Cod the breadth of two Fingers: then put under the Varicous Vein a Needle having a double Silk or Thread in it; as high as you can, that you may bind the roots thereof: then let the Needle be put again after the same manner, about the lower part of the same Vein, leaving the space of two fingers between the Ligatures: But before you bind the Thread of this lowest Ligature, the *Varix* must be opened in the midst, almost after the same manner as you open a Vein in the Arm to let Blood; that so this gross Blood causing a Tumour in the Cod, may be let out, as is usually done in the Cure of *Varices*. The Wound now remaining must be cured after the manner of other Wounds, leaving the Threads in it, which presently fall away of themselves; and being grown Callous especially in the Upper part thereof where the Vein was bound, it must be Cicatrized, for so afterwards the Blood can never run that way.

LXI. Diseases of the Yard, as Warts, Carnosities, Ulcers.

§ 1. Warts if not malignant, are

to be tyed with a Thread and so cut off: their more particular cure see cap. 24. sect. 18. Of this Book.

§ 2. The Cure of Caruncles or Car-nosities we have fully taught in cap. 26. sect. 31. § 6. 7. and 8. afore-going, to which we shall now refer you. § 3. Ulcers are cured by the direction given in cap. 25. sect. 63. § 4 and 5. and in cap. 26. sect. 31. § 2. 3. 4. and 5.

LXII. Impotency in the Act of Generation.

§ 1. If it be from defect of the seed, you must give things which increase the seed, as all shell fish, chiefly Oysters, Lobsters and Crabs, &c. The greater root of Dog stones, Cubebs, yolks of new laid Eggs with Wine and a little Oyl of sweet Almonds: Crollius his Essence of Satyrion, Diasatyrion Nicholai, Extractum Satyrii Compositum: Mynsicht his Confectio Magnanimitatis, Choccolet, Aqua Magnanimitatis. § 2. If it be from a defect of Vital Spirits, you may give Blood of Satyrion with generous Canary; Confectio Alkermes of Our prescription; Confects of Musk and Ambergrise, which admirably fortifies the Spirits. § 5. If it be from a Resolution or Palsy of the Yard, you must cure it as a Palsy; you may give the Blood of Satyrion p. j. mixt with Sparrows Blood p. ij. also you may anoint under the Arms with the same: Balsamum Spasmatum Mynsichti to anoint with is good; so also Oleum Formicarum Mynsichti, and the common Oyl by Infusion, Balsamum Venereum, Oyl in which Cantharides have been dissolved: if you anoint

the Perineum and great Toe of the right Foot with the same, they increase Lust wonderfully: so also a Simple washing of the Privities with Decoction of Columbines, which must be followed with a Fumigation of a Dead Mans Tooth, being Poudred and cast upon Coals.

LXIII. Priapismus, an Erection of the Yard without desire.

§ 1. If it arises from a cold Distemper, it is remedied by applying hot things respecting the Nerve; as Oyls of Rue and Savin, Balsamum Apoplecticum Horstij & Mynsichti, Balsamum Nervinum Schroderi, Oyl of Amber, and such like. § 2. If it be from the too great an openness of the Mouths of the Vessels, sending forth plenty of spirits, by reason of the heat of the Loyns and Kidnies; you must (universals being premised) cool those parts with water-Lillies, Lettice, Purslane, Nightshade, Saccharum Saturni, Unguentum Populeon: To the Yard you may apply Repercussives, which gently cool and repel: Inwardly, you may give Seeds of Rue, Agnus Castus, Syrup of Lettice, Purslane or Poppies, &c. § 3: If all these things fail, (you must if the Patient can bear it) put him up to his Navel in cold water.

LXIV. Tentigo, The Extension of the Clytoris, or growing to too great a bulk.

§ 1. In order to the Cure you must abate the humours, and correct the Blood, First by purging with

with Medicines proper for the Constitution : Secondly, by administration of Discussives, chiefly the leaves of the Lentisk and Olive : Thirdly, by observation of a slender and cooling Diet. § 2. You must take away the Excrecence by gentle Causticks, as burnt Alum; Unguentum Aegyptiacum, Lye of Pot-ashes, boyled with Roman Vitriol, adding towards the end a little Opium, of which make Troches; with which Powder let the flesh be strewed over. § 3. If this proves not effectual enough, you must cut it off either by Ligature or Section with an Iron Instrument, having a care to avoid an Inflammation.

LXV. Straitness of the neck of the Womb.

§ 1. If it be from the Birth, by reason of the growing of the Orifice together; you must moisten the part with warm Fomentations, and then it must be cut streight up, taking care that the Bladder be not hurt; after which the humour is to be drawn forth, and a Tent must be applyed dipt in a ripening Medicine. § 2. If you fear a flux of Blood, you must have in a readinesse some astringent Powder, as Pulvis adstringens, Thuraloes Galeni, or some such like. § 3. Afterwards you must wash with Honey and Water, Or Decoction of Scordium with Honey of Roses: Or Tincture of Roses, so sweetened, & then apply things which may Cicatrize and heal. § 4. If it be a growing together after the Birth by reason of a Wound or Ulcer, wherein the sides of the Neck are grown together, you must make

your Incision with great Care: but if there is a Callous substance, you must first cut it off with an Incision Knife, or Pen-knife, and then heal it as before. § 5. But if it be a spongy flesh, you must use discussives and dryers, as Birthwort-root, Myrrh, Frankincense, Mastich, fine Sole, &c. then you must apply Corrosives, which will act without pain, such as that in cap. 26. sect. 31. § 8. made of Hony calcined to Ashes, at last you must cut it off.

LXVI. Pustles of the Womb.

§ 1. You must take away the antecedent cause by proper evacuations with such things as are proper to the Constitution of the Body. § 2. You must alter the habit of the Body with such things as cool, cleanse and open; Decoct. of Fumitory and Succory in Goats Whey, is good; so also their juyces clarified, Decoction of Hops, Ceterach. Agrimony, Borrage and Bugloss, or the clarified juyces of the three last. § 3. If they be Venereal, after purges proper to the Venereal Disease, you ought to exhibit a Decoction of Guaiacum for twenty or thirty days. § 4. For Topicks if they are Benign, you must apply Discussives, which may mitigate the sharpness of the humour; also Baths, and half Baths: after which often wash the part with Wine in which Niter is dissolved, or with Our Aqua Ophthalmica, Or a Lime-water of a just strength. § 5. If they be malign from the Pox, which are stubborn and contagious, wash them with Water made of Aloes ʒj. fine Verdegriſe ʒj. Plantane, and Rose-water, white

White Wine, A. ʒiv. mixt together: Or with Aqua Phagedenica, Liquor Mercurij Saccharatus Myrsiceti, Or Liquor Mercurij sublimati, all which see in Our Pharmacopœia.

LXVII. Condylomata, Swellings of the Wrinkles in the Neck of the Womb.

§ 1. The cure respects the taking away of the antecedent Cause; and in the Repercussion, Discussion and dying away of the Conjunct. § 2. The antecedent Cause is removed by purging Melancholly and Cholter adust; Tincture of Sena is an admirable thing, especially if mixt with a little Cremor Tartari: so the Tinctura Melanagoga Grulingij, Extractum Benedictum, Extractum Melanagnum, Quercetani, and Pilula de Lapide Lazuli: to these add Confectio Hamech dissolved and taken in Whey in which Fumitory has been boyled. § 3. For Topicks you must mix Discussives with Repercussives, either in Fomentations, Baths, or Unguents; afterwards you must apply astringents and dryers alone, as Unguentum Comitisse mixt with Refrigerans Galeni, Ana. § 4. If there be an Inflammation, you must mix with your Topicks Anodyns: and if the Pain be very great, you must mix Narcoticks, and use often Baths. § 5. If it be without Inflammation, and recent, you must use Repercussives and dryers. § 6. If it be from cold, and withal inveterate, you must first use emollients, then digest and dry: Oyl of Amber alone is miraculous: so also if mixt with as much Oyl of Roses, and Wax;

juice of Mullein is commended, and the Pouder of Egg-shells burnt. Or this, R. juice of Mullein ʒss. Oyl of Roses and Wax, A. ʒij. Oyntment of Troches of steel ʒj. mix them: Oyntment of the Mad-Apple has also here place. § 7. If the Condyloma yields not to these things, it is to be cut off by Instrument, and then Pulvis Astringens or Thuraloes Galeni, is to be strewed on.

LXVIII. Hæmorrhoids of the Womb.

§ 1. The Cure is performed by evacuation, revulsion and derivation: you may evacuate the humour by the things mentioned in the former Section. § 2. You may make revulsion by Emeticks, as Sal Vitrioli given à ʒj ad ij. and if the sick be of a strong and robust Body, you may give Hel-lebor, and Antimonials, by Frictions and Ligatures in the upper parts; and by the application of Cupping-Glasses to the Arms and Shoulders. § 3. You may make Derivation by making an Issue in the Thighs or Leggs; and by provoking the Hæmorrhoids, if they have been accustomed to that Evacuation; as also the Terms, if they be stoppt. § 4. If they be painful, you must use Anodyns which may mitigate the pain, and if it be Violent, in Topicks you may mix Narcoticks, as also Baths and half Baths. § 5. If they be open, and flow moderately, they are to be committed to Nature: if they flow too much, causing a dejection of strength, whereby the Body may be induced to an evil habit, you must make strong Revulsions, then purge with Myro-

Myrobalans, Tamarinds and Rhubarb, and at last give things which stop Blood. § 6. If they be Blind (wherein no Blood flows at all) the Cure is done by emptying them, by mollifying and fomenting the part with the Emollients and aperients; or such things as open the Mouths of the Veins, and discuss the matter; Or by Artificial opening of them with Instruments: the rest of the Cure see in Sect. VII. where we shew the Cure of the Piles in Ano.

LXIX. Ulcers of the Neck of the Womb.

§ 1. If they be foul, they are to be cleansed with this, R. juce of Smallage ℥ij. Honey of Roses ℥jss. Turpentine ℥ss. Barly flower q. s. boyl and make a Liniment.

§ 2. If they are eating with a coloured matter, green, livid, and stinking, flowing forth with pain, you must use Aloes and Wormwood, which are the chief of Absterfives: or you may cleanse with Unguentum Fuscum Wurtzij.

§ 3. If they are small and long Ulcers called Rhagades, arising externally from painful labour, you must use an absterfve and astringent Clyster: but if internally from an Inflammation, Condylomata, or afflux of sharp humours: you must first take away the antecedent Cause with proper Purging and Revulsion: then cleanse as aforesaid with Topicks. § 4. But if mild, with little matter, thick and not stinking, you may use the gentler absterfives, as Whey, Barley water, or Decoction of Lentils with Honey of Roses. § 5. The Ulcer being sufficiently cleansed, you must

use Epuloticks, such as we have enumerated in cap. 25. Sect. 32.

§ 1, 2, 3, 4, 5, &c. and others there mentioned: Or Inject with our Aqua Ophthalmica, and anoint with Unguentum de Minio, Nutritum, Rubrum defecatum, Comitissæ, or Tuttiæ. § 6. If the Ulcer penetrates to the Intestinum Rectum, so that the matter comes forth by Stool, you must exhibit Lenitive, absterfve, and drying Clysters, such as in the Cure of a Dysentery. § 7. If the Ulcer degenerates into a Fistula, which chiefly falls out, when it opens outwardly towards the Hip, and is commonly void of Pain, unless near a Nervous part: If it be Inveterate or old, it is best to be left to a Pallative Cure, in which a Vulnerary Diet is to be taken, and at fit seasons the Body to be purged, and often to be repeated, with Sweating three or four times a year: injecting also absterfve and strengthening things: But if the Fistula is Recent, and there is hopes of Cure, after drying of the part, being mollified by Vulnerary Potions, the Callous must be wasted either by Causticks actual or potential, or Cutting, and to be cured as other Fistula's. § 8. If the Ulcer be molested with an Itch from a sharp or Salt humour falling into the part: put up a Pessary dipt in Unguentum Enulatum cum Mercurio: Or in Aegyptiacum dissolved in Sea or Alum water: Or in New Butter (in which Quicksilver has been killed) mixt with flos Sulphuris. The full cure see in cap. 26.

26. sect. 30. § 1, 2, 3, 4. of this Book.

LXX. Distemper of the Womb.

§ 1. *The hot Distemper of the Womb. is cured by a cooling Diet and cooling Medicines: but they ought to be temperate, least they weaken the heat necessary for Conception, or the Vessels through which the Courses flow be condensed, and the Nerves in the Back and Loyns be hurt: you may give them inwardly by the Mouth: outwardly apply them to the Back and Loyns: and cast them into the Womb by injection. You ought also to evacuate with Sena, Rhubarb, Myrobalans, Tamarinds, Manna, Cassia, Syrup of Roses solutive, flowers of the Vitriol of Venus and Mars à gr. iij ad vj. in Syrup of Roses, &c.* § 2. *The cold Distemper of the Womb is cured by a heating diet, and heating Medicines: as Roots of Birthwort, Spicknard, Avens, Parsley, Smallage, Angelica, Eringo, Zedoary: Leaves of Bawm, Savin, Dittany of Creet, Penny-royal, Mint, Sage, Hyssop, Rosemary, Mugwort, Motherwort: Flowers of Marigolds, Sage, Saffron, Rosemary, Lavender, Bently, Borrage, Bugloss: Spices, as Nutmegs, Cubebs, Anacardiums, Cinnamon, Pepper, Cardamons, grains of Paradise: Oyls of Mace, Amber, Myrrh, Cinnamon: Powers or Quintessences of Angelica, Sage, Rosemary, Oranges, Limons, Amber, Cloves, Mace, Nutmegs, Sassafras, Rhodium, Carraways, Juniper berries, &c. Fæcula of Bryony, Extract of Zedoary, all which things may be*

used both inwardly and outwardly, according to the forms of their Preparations. § 3. *The moist distemper is cured by diet and Medicines drying: but you must be cautious of things too astringent, least they should detain the Excrementitious humour; you may therefore give astringent Purges, first, as Rhubarb, Myrobalans, &c. afterwards abstersives mixt with dryers, which may be given by the Mouth, and exhibited by Injection. The fumes of the shavings of Ivory and Sage boyled in Wine and Water ana, conveyed through a Pipe to the Womb is good; so also Sulphurous Baths, which are the chief of all External things.* § 4. *The dry distemper of the Womb is cured by a moistening Diet and Medicines, as Borrage, Bugloss, herb Mercury, Sow-thistles, Lettice, Purslane, Violets, Mal-lows, Althea, Parietary, white lillys: Baths of Sweet water, oyls of Almonds, of Nuts, of Ben, white Lillys, all sorts of Marrows, Unguentum Populeon, &c.* § 5. *The cure of a cold and moist distemper of the Womb. You must first prepare the matter, by things hot, attenuating and Hysterical: Secondly, you must make universal evacuations of the whole Body by Flegmagogues and Hydragogues, as Tinctura Cathartica Clossæi, Phlegmagoga & Hydragoga Grulingij, Catholica Grulingij, Tinctura Senæ: Thirdly, you must purge the Womb it self by Pessaries and attractive Injections: Fourthly, you must dry it by Sulphurous and drying Baths which are also Sudorifick, made with*
Dea

Decoction of China, Sarfa, Lentisk-wood, Guajacum, and Juniper-berries.

LXXI. Obstruction of the Womb.

§ 1. If it proceeds from External causes you must use things which humect and mollify, as Oyls of Almonds, Lillys, Hens-grease, fresh Butter, emollient Baths of Mallows, *Althæa*, *Fœnugreek*, *Parietary*, *Unguentum de Althæa*: Inwardly you may give juyce and Syrup of the juyce of *Parietary*.

§ 2. If it comes from a scar, flesh, or Membrane growing on the Mouths of the Vessels, or from a growing together of the Mouths of the Vessels, it is scarcely curable: if you attempt it, you must use things emollient, as *Unguentum de Althæa*, Oyls of Lillys, Elder, Violets, fresh Butter, Hogs and Bears grease: Stags, Horses, Calves, Hens, and Capons fat; Sheep and Goats Suet, *Oesypus*, Oyls of Camomil, Earth-worms, and Foxes; Oyntment of *Bdelium*, of Liquid Storax, of *Ammoniacum* and *Galbanum*, &c.

§ 3. If it be from plenty of thick viscus humours: you must first attenuate and open; then evacuate the contained matter: after cleanse, and that new humours may not fall down, make strong Revulsions in the upper parts: you may cure it with the same things that open other Obstructions, to which Hystericks are to be added: sharp, biting, and bitter Medicines which provoke the Courses, are good; steeled Wines, and emollient and aperient Baths. § 4. If it be by Compression from a Scirrhus Tumor, it

is scarcely to be attempted, and by most accounted incurable: but if the Compression be from too much fat of the adjacent parts, the sick must use a slender Diet, and extenuating Medicines.

LXXII. Inflation of the Womb.

§ 1. It is cured as other Inflation, first you must open with some aperitive drink or decoction, with which you must mix Carminatives and Hystericks. § 2. Secondly, you must purge with things which expel Wind, as *Species Hieræ*, and *Diaphœnicon* with *Castor*, *Pilulæ fetidæ*. § 3. Strengthen the Womb with Decoction of Nutmegs and Featherfew-roots boiled in Water, Beer, Ale or Canary, and sweetned with white Sugar Candy. § 4. For Topicks, you may make a suffumigation with Nutmegs and Mace: exhibit a Carminative Clyster: and apply the Emplaster of Bay-berries with Venice Treacle to the Region of the Womb below the Navel.

LXXIII. Inflammation of the womb.

§ 1. You are first of all to open with aperitives, and make Revulsion in the upper parts that the Blood flowing to the Womb may be diverted: The Blood contained in the Womb is to be resolved and derived: and if the Tumor seems to Apostemate, it is to be farthred with Suppuratives, and then broken and cleansed. § 2. To open we prescribe an opening Decoction, or *Mynsicht* Scorbutick Decoction, with gut. xx. of spirit of *Sal Armoniack*, or ʒj of its Volatile

tile Salt in every Dose. § 3. To make Revulsion, you must apply Cupping-Glasses to the Shoulders, Back, and Loyns; and make Frictions and Ligatures on the upper parts: if the Stomach be disaffected, and seems to be foul, and there be a sickness there, and a Loathing of Food you may cleanse it with *Sal Vitroli*, or which is better with *Sal Tartari Emeticum Mynsichti*. § 4. You must make Resolution of the Blood already in the Womb, by discussives: foment the Region of the Womb with *Epithema Cephalicum*: then anoint with *Oleum Violaceum*, mixt with as much Oyl of Savin: after apply *Cataplasma Resolutivum Foresti*. And to the Womb it self apply Decoction of Mother of Time in steeled Water, with Spunges, which is an excellent thing. § 5. Make Derivation, first by exhibiting an emollient and cooling Clyster, and often repeating of it, as *Enema Emolliens Schroderi*, for frequent Clysters do much Temper the Inflammation, seeing the Womb doth rest upon the *Intestinum Rectum*, but they ought to be little in quantity, that they may not compress the Womb; and here *Enema Anodyn. Mynsic.* may take place. And if viriuous humours, chiefly Cholerick do abound, you must evacuate them with gentle and cooling Medicaments, as Syrups of Roses and Violets solutive, *Manna*, *Cassia*, *Rhubarb*, *Catholicon*, *Electuarium Lenitivum*; § 6. Repel also by injecting into the Womb Decoction of Mother of Time in steeled water, or *Injectus ad fluxus U-*

teri; Or this, *R* leaves of *Plantane*, *Water Lillys*, *Night-shade*, *Endive*, *A.M.j. red Roses P.ij. water q.s. boyl to the consumption of a third part: strain and add Oyl of Myrtles §j. Vinegar §ls.* make an Injection: but cooling and repelling Medicines are not long to be used, least the Inflammation harden, and so degenerates into a *Scirrhus*; wherefore with Repellers you will do well to mix emollients and discussives, as *Althæa*, *Mallows*, *Mugwort*, *Fennugreek*, *Camomil*, *Mellilor*, &c. § 7. If the Feaver is great and the pain Violent, you may after the use of Catharticks give cooling things, as *Juleps* and *Emulsions*: and in the vehemency of Pain *Narcoticks* may be added, which may also be given by themselves; you may also exhibit a cooling Clyster, in which you may put a little Opium and Saffron: and in this case you may inject into the Womb, Goats, Sheeps, or Cows Milk, mixt with Rose-water or Plantane-water, and Opium and Saffron, *A. gr. iij. or iv.* Or you may put up a Pessary made of *Philonum Romanum* with Cotton. § 8. In the declining of the Disease you must iterate the evacuations with gentle Purgers: and when the Disease draws towards an end (known by the remission of the Symptoms) discussives must be used in greater quantities than before. § 9. If the Tumour will not discuss but Apostemate, you must farther the suppuration with the *Cataplasma of Onions Compound* (in cap. 24. sect. 1. § 5. of this Book.) When the matter is ripe (known by the abatement

ment of the heat and pain, and softness of the Tumour) you must break it, either by some strong motion of the Body: or by fasting Cupping-Glasses; or by cleansing and attenuating Injections, or Pessarys which will draw and break; the chief of which is the *Pessus aperiens Mynsichi*: when the Apostem is broken, you must cure the Ulcer as we teach in Sect. LXXVI. following, and in cap. 26. sect. 30. foregoing.

LXXIV. Scirrhus of the Womb.

§ 1. The cure hereof differs not from the Cure of the Scirrhus of other parts; it chiefly respecting the antecedent and conjoynd causes.

§ 2. In respect of the Antecedent cause; you ought to provoke the Hemorrhoids (where they have been accustomed,) for so dreggy Blood is evacuated, and the humours are turned from the Womb, by reason of the communion or consent which those Veins have with the Womb.

§ 3. Then Purge often by certain Intervals of time, first with gentle things, then by degrees with stronger and stronger; giving such things beforehand as may prepare the Melancholy humor for evacuation, and open the passages: among the chief openers, the Preparations of Steel are accounted, which dissolve the thickest and most rebellious humors, and open the strongest Obstructions.

§ 4. Afterwards make an Issue in the Thigh, to derive the viscous humors from the Womb; which keep open till the whole Scirrhus is dissolved. § 5. In re-

spect of the conjoynd cause; you may make a fomentation or Bath to sit in, of emollient herbs and roots, in Broth of Sheeps Guts; to which you may add Bryony roots and wild Cucumers; and of the same emollient Decoction you may Inject into the part, Oyls of Lillies, and Camomil or Elder being added: The emollient and dissolutive Oynment of *Rhasis* is an admirable thing, thus made: *R. Bdellium, Ammoniacum, Galbanum, Ana.* beat them in a Mortar with Oyls of Ben and of Lillies; then add Mucilages of Fennigreek, and Linseed, and Figs, A. q. s. make an Oynment; and, if with Wax you make it into an Emplaster, it may be applied to the Region of the Womb both before and behind: But the *Emplastrum de Galbano Crocatum Mynsichi*, is inferiour to none; Bitumen and Bituminous Clay, as also the fume of the Stone Pyrites heat red hot and quenched in Vinegar are very good: and in a word, all those Medicines which we have instituted in the Cure of a Scirrhus of the Liver and Spleen, both Internal and External. § 6. But you ought in the whole course of the Cure, to be very cautious in the application of your Medicaments, that they be mild and gentle, and prepared with great Judgment, least they make the tumour harder, or cause it to degenerate into Cancer, which is much to be feared when Medicaments have been used for a long time together. You had better therefore intermit their use for sometime, and then attempt it again, unless you see

the Scirrhus (having lost all sense of feeling) has put on the nature of a Stone.

LXXV. Cancer of the Womb.

§ 1. Since no perfect cure can be prescribed for this Disease, but that the sick must certainly labour under it to the day of Death; we shall satisfy our selves with a Palliative one: the substance of which is to hinder a Cancer not ulcerated, from ulcerating: and an ulcerated Cancer to stop it from farther eating. § 2. First, Let the sick purge and evacuate the antecedent cause of the Cancer, as we have taught in cap. 24. sect. 15. § 9, 10. aforegoing. § 3. Secondly, Provoke the Terms if stop't; and the Hemorrhoids where they have been accustomed, for they make a famous derivation. § 4. Thirdly, For Topicks, you must apply such as gently cool and astring, without any corrosive or biting property, made in the form of a Balsam or Oyntment: Sennertus his Oyl of Frogs is an excellent thing mentioned in Our Doron lib. 2. cap. 3. So also Frogs washed, boyled, and laid on as a Pulvis, and their Broth used as an Injection, which are accounted as Specificks; and the juyce of a River Crab used by Injection, with the Essence of Herb-Robert. The part affected may be fomented with Waters or Decoctions of Poppy, Lettice, Purslane, Cucumers, Melons, Plantane, Nightshade, red Roses, and Camphir: they may also be wrought in a Leaden Mortar, or you may dissolve in them a little Saccharum Saturni, and inject into the Womb. Or this:

℞ Violet Water ℥xij. Plantane, Nightshade, Housleek-waters, A. ℥ij. white Troches of Rhases ℥ij. Saccharum Saturni ℥j. mix for an Injection: and if the pain is violent, use the white Troches with Opium. After Injection anoint with this: ℞ Oyl of Myrtles and Roses, A. ℥ij. Oyl of Poppies, juyces of Nightshade and Housleek, A. ℥j. stir all together about a Leaden Mortar with a Leaden Pestle, till they are Black: to which add Camphir ℥j. in fine Powder. Or this: ℞ Oyls of Eggs and Roses, A. ℥iij. Saccharum Saturni ℥ij. mix in a Leaden Mortar to blackness. Or this with which cancerous Tumours of the Dugs have been perfectly Cured: ℞ Oyl of Eggs ℥ij. juyces of Nightshade, and Veronica, or Housleek, A. ℥ss. Quicksilver not killed ℥ij. stir them stoutly in a leaden Mortar till the ☿ is perfectly mixed; these things belmeare upon the Womb, or convey them thither upon long Tents or Pessaries, or upon Wax Candles wound up in Linen. § 5. If the Cancer be ulcerated you may add to the former Oyntments, Litharge and Ceruse; and the quantities of the Saccharum and Quick-silver may be augmented; and if the pain be very Vehement, you may make an emollient Bath to sit in. § 6. But because sometimes the pain is so violent that the Sick cannot rest or sleep neither night nor day; and that the former things do no good; you must be necessitated to give Narcotics, both inwardly by the Mouth, and by Injection to the Womb. § 7. If much Blood falls away whereby the sick is in dan-

danger, you must make an Injection of juyce of Nettles mixt with a little Frankincense and Pouder of Toads.

LXXVI. Ulcer of the Womb, Gangreen and Sphacelation.

§ 1. We have spoken somewhat of this Cure in cap. 26. sect. 30. aforegoing; but because we have been a little too Concise there, we shall supply those defects here. § 2. You must purge often with gentle things, such as Sena, Rhubarb, Tamarinds, Myrobalans, Cassia, Catholicon, &c. that the Morbifick matter may be diverted. Forestus, lib. 28. obs. 48. saith, That a gentle Woman was cured of an Ulcer in her Womb, by taking every fourth day Decoction of Sena, Epithymum, red Roses, and Indian Myrobalans sweetned with Sugar, to the quantity of ℥v. making also cleansing Injections into the Womb. The Catholick Tinctures of Grulingius and Clossius are famous, and ought always to be kept in a readiness. § 3. If the Stomach be foul, and the sick easy to Vomit, you may give an Emetick, which may prove an excellent Revulsion: but the Sick in these times of Purging ought to use some proper Vulnerary diet, constituted in part of Hystericks: the diet in cap. 26. sect. 18. § 16. is of an admirable use. § 4. If signs of a Heftick Fever appears, give Milk, especially Asses Milk mixed with Sugar of Roses, for forty days together: Moreover to heal give Boles of washed Turpentine made up of Sugar of Roses to cleanse, consolidate and fill up the Ulcer: Or Pills of Bdelium

alone or made up with a little Opium: the Troches of Winter-Cherries are good in this case, especially if the Pain be vehement. The Pulsis Dysentericus crollij is also an experienced thing, taken from ʒj ad ʒij. § 5. For Topicks, besides what we have mentioned in the place cited, you may Inject with Emulsions of the cold Seeds, Whey, Milk, emollient Decoctions, and Decoction of Poppy-seeds; also fair Water warmed; and ten or twelve times a day Injected, is of singular use: several have been cured with the use of it alone: for by it the heat and Inflammation is allayed; the pain mitigated, and filth of the Ulcer washed off. § 6. The heat and pain being abated, you must cleanse; which you may do with Hydromel, or Whey sweetned with Sugar or Honey of Roses; Or a Decoction of Smalage, Parietary, and Lentils so sweetned. Or this which is much better: R roots of Gentian, Rhapontick, Zedoary, round Birthwort, leaves of Savin, A ʒj; white Wine ℔vj. boyl till ℔ij. is consumed; strain and dissolve therein Honey of Roses ℔ss. If the Ulcer is very foul, putrid and stinking, dissolve in the aforesaid Injection, a little Unguentum Egyptiacum. § 7. The Ulcer being well cleansed, you must now consolidate and dry; which you may do with Injectus ad fluxus Uteri, or Injectus Uterinus, Or, with the white Potion made of Turpentine dissolved with the yolk of an Egg; and mixt with Plantane Water; Or with Balsam of Sulphur, and Plaster of the same; If much flesh be wanting, you may mix

with the said Injection some Incarnative Pouder: as \mathcal{R} Myrrh, Sarcocol, \mathcal{A} . $\mathfrak{z}\mathfrak{j}$. roots of Orrise, of Birthwort, of Comfrey, \mathcal{A} . $\mathfrak{z}\mathfrak{ss}$. fine Aloes, Mastich, \mathcal{A} . $\mathfrak{z}\mathfrak{i}\mathfrak{i}\mathfrak{j}$. make a fine Pouder: of which let $\mathfrak{z}\mathfrak{ss}$ be mixt with every Injection: Lastly, make a Suffumigation to be received up the Womb, by a Pipe or Close-stool, for that pierces to the bottom of the Womb and drys up the Ulcer powerfully. See the fume in the place aforesaid.

Of a Gangreen and Sphacelation of the Womb.

§ 8. The Cure of these in the Womb, are much like the Cure of them in other parts: (though very few have them and live;) See cap. 24. sect. 4. cap. 25. sect. 24, and 65. § 14. and cap. 26. sect. 21. § 4, 5, 6, 7, 8 and 9. to which places for the principal part of the Cure we shall refer you, yet this following may be observed. § 9. First, That if it be in the Neck of the Womb, or near the outward parts; you may make Scarifications and wash or bath with Decoction of Myrrh and Wormwood: or first foment the part with Spunges with S.V. in which a little Spirit of Sal Armoniack is put; after Scarrify, if need be, then Bath with the Decoction aforesaid: anoint with *Agyptiacum*, Or *Apostolorum*, and apply this Cataplasim: \mathcal{R} flower of Barley, of Beans and of Orobus, \mathcal{A} . $\mathfrak{z}\mathfrak{i}\mathfrak{j}$. Oxymel $\mathfrak{lb}\mathfrak{j}$. boyl to a thickness; to which add Meal of Lupins, pouders of Myrrh, Aloes, Wormwood, \mathcal{A} . q.s. § 10. If the Womb be spha-

celated, it must be cut off: or if it fall out, it must be tyed with a proper Ligature, and bound every day faster and faster, till it is separated: Skenkius relates many of these Cures which have well succeeded. § 11. Lastly, be careful to strengthen the Heart by Cordials and Cardiac Epithems: and exhibit often emollient, cleansing and cooling Clysters, which give great relief to the part afflicted.

LXXVII. Dropsy of the Womb.

§ 1. In the first place, things aperitive mixt with Hystericks ought to be given, as Volatile Salt and Spirit of Sal Armoniack, Salt and Spirit of Hartshorn, with Spirit and Tincture of Castor, Ens Veneris and other openers. § 2. Then purge with such things as we have formerly mentioned, mixt with Hystericks, which ought often to be iterated, that a derivation may be made of the water another way: and indeed almost all the same things may be used here, which we have advised in the Cure of the Cachexy and Dropsy: But especially the *Pilula Lunares* mixt with some Uterine Medicament: Colocynthis is also of great force, because it is a specifick Uterine purge. § 3. This done, you must repeat again Aperitives, which may be mixt with Diureticks and Ememnonagogicks, such as we have proposed in the stoppage of the Courses at Sect. XXI. foregoing: after taking of which things, the must use strong Exercise, that the vitious humours bred in the Bowels and habit of the whole Body may by Sweating and heat be

be diffipated, and the Water in the Womb be voided out. § 4. To discusse the humour contained in the Womb, you may give this Bolus which is a most effectual thing: *R* Mineral Borax \mathfrak{z} ss. Saffron, Volatile Sal Armoniac, Mercurius dulcis, \mathcal{A} . \mathfrak{z} j. make a Powder, which with juyce of Savin make into a Bolus: Outwardly, Set the Sick in a Bath made of Decoction of Bryony-roots, wild Cucumer, leaves of Ebulus, Elder, Origanum, Calamint, Wormwood, Sage, Time, Hysop, Savory, Rue, Bay, Marjoram, Penny-royal, Featherfew: Seeds of Cumin, Annis, Fennel, Bay and Juniper-berries: Flowers of Melilot, Camomil and Rosmary: Vine Ashes: and if she can conveniently, or is able to endure it, let her Sweat very well. § 5. If she easily Vomits you may make a profitable Revulsion, by exhibiting a proper Emericke twice a Week: Sal Tartari Emericum Mynsichti is a good thing. § 6. Derivation may be made by Issues in the Thighs: also by Injections and Pessaries into the Womb to evacuate the humors therein contained: as *R* roots of Assrabacca \mathfrak{z} ij. leaves of Savin, Featherfew, \mathcal{A} . \mathfrak{M} .j. Mechoacan, Caraways, Cumin-seed, \mathcal{A} . \mathfrak{z} j. boyl in Rhenish Wine q. s. strain, and to \mathfrak{z} vj thereof, put Oyls of Orrice and Elder, \mathcal{A} . \mathfrak{z} j. of Juniper \mathfrak{z} ss. make an Injection. A Pessary: *R* Colocyntidis, Mechoacan, Esula, \mathcal{A} . \mathfrak{z} j. Elaterium, Sal Niter, \mathcal{A} . \mathfrak{z} j. boyl- ed Honey q. s. make a Pessary. And you may make a Derivation by Clyster, for which purpose we commend Enema Carminati-

vum Mynsichti, & Emolliens Schroderi. § 7. In a Windy Dropsy, you may apply Cupping-Glasses with much flame to the Navel: then anoint the Belly from the Navel downwards, with Chymical Oyls of Castor, Dill, Rue, Camomil, Wormwood, Elder, Southernwood, or rather with oyl of Amber, which is miraculous: after apply Camomil bruised & fryed in a Pan, hot to the Place: and Lastly let the Womb be Fumigated with the Powder of three or four Nutmegs cast upon an Earthen Pan with live Coals, and so placed that the Woman may receive the Fume by a Funnel up into the Womb: If the Inflation is after Child bearing, you need evacuate no ways but by the Womb, which may be tarthred by attractive Pessaries, or Cupping-Glasses to the Thighs, or the Fumigation of Nutmegs aforesaid. § 8. The last thing to be done is to strengthen the Womb which may be done with Antimonial Pills, commended by Hartman, Tinctures of Antimony and Coral, and Water or Decoction of Camomil flowers given ad \mathfrak{z} iv or \mathfrak{z} v at a time for some days.

LXXVIII. Procidencia Uteri, Falling down of the Womb.

§ 1. You are first to reduce the Womb into its place, as we have taught, cap. 14. sect. 21. of this Book. § 2. After the Womb is reduced, it ought to be retained either by the way taught in the place just now cited: Or by a suffumigation of the Skin of a Salt Eel, dried in the Smoak, and Powdered. Sweet things applied

to the Nose and stinking things to the Womb are good: so also Cupping with much flame under her Breasts, and upon her Navel: A Bath to sit in made of astringent things in Red Wine; after the Bath, a Fumigation of Frankincense, Castor, Amber, and *Assa fetida*: you may also anoint with *Unguentum astringens*; and apply over the Womb an astringent and binding Emplaster: *Pessaries* may be made of Cork covered over with Wax, which may be either a flat round, Globular, or Oval and pretty large; which may be conveyed into the Cavity of the Womb, to keep it in its place, and never to be taken out; notwithstanding all which Women may do their usual Work, have Coition with Men, Conceive, carry their great Bellies and bring forth: an Example of which I knew in a worthy Matron. If the Woman will not admit of such a kind of Pessary, she must have a proper Truss, whereby the Womb may be defended from cold, and be kept from the danger of falling out. § 3. Inwardly, you must remove the antecedent cause by such things as purge out stigmatick humours which relax the Ligaments of the Womb. Agrick is excellent in this Case, so also its Decoction, Infusion and Tincture, as also the *Tinctura Phlegmagoga Grulingij*. § 4. After sufficient cleansing and purging, you must give things to strengthen the Womb, as *Laudanum Paracelsi*, Coral prepared, Tinctures of Coral and Antimony, Decoction of Oak-moss, Harts-horn, Bay-

leaves, Acorns: together with a Decoction of *Guajacum*, *Sassa*, and *China* for twenty or thirty days together. The Belly must be kept not bound, least in going to Stool, the Womb be forced down; nor loose, least the Membranes holding the Womb be relaxt.

LXXIX. Weakness of the Womb.

§ 1. If it arises from Distemper of the Womb, either hot, cold, moist, or dry, whether with or without matter, you must cure it as we have taught at s. 70. foregoing. § 2. If it be from defect of Native heat, you ought to administer things Calesfactive and Hysterick, mixed with things which have some astringency withal, such are Spirit of Castor, mixt with Red Wine, to be given by the Mouth: and Tincture of Musk and Ambergrise, mixt with Red Wine, for a Fomentation, and Injection. § 3. If it be from an Occult Quality, you must apply things, which either sympathize with the Womb: or are Antipathetical to the Disease in their proper essence and whole substance: And in this Case Amulets are often found to be of force.

LXXX. Pain of the Womb.

§ 1. The Cure has respect first to the mitigation of the pain by *Anodyns*: secondly, to the removal of the Causes. § 2. If it arises from Corrosion, it must be cured as those Diseases which are caused thereby; as Ulcers, Whites, sharp flux of the Terms, &c. § 3. If it be caused by distention from Clots of Blood: you must dissolve the Clots by giving inwardly the *Pleurick*

tick Spirit of *Renortus*, dulcified Spirit of Niter, Spirit of Sal Armoniack, &c. in a proper Vehicle : If it is become malign; you may give Treacle mixt with Hippocras : also you ought to empty it, by things which force it away : and by attractive Injections and Pessaries: § 4. If it be by distention from menstruous Blood : or vitious humors, you must give things which provoke the Terms; and things which are aperitive, and evacuate the evil humours. § 5. If it be from Wind, you must give openers, carminatives, and things which will make evacuation: The Cure must be like that in the Cholick, by Medicaments discussing Wind: here are good, Tinctures of Antimony and Coral: Water or Decoction of Camomil flowers given ad ℥iv at a time. § 6. If it be from an Inflammation, See the Cure thereof at sect. LXXIII. a foregoing. § 7. Lastly, If it be from Seed retained and corrupted, you must cure it as we have taught at sect. XXIII. § 8. In the Suffocation of the Womb; or as we teach in sect. LXXXII. in the Cure of the Rage or Madness of the Womb.

LXXXI. Flux of the Whites in Women.

§ 1. The antecedent cause is to be evacuated, according to the humours abounding, with proper Catharticks: or a convenient Diet, for forty or sixty days, such as we have taught cap. 26. sect. 18. § 16, which is a most excellent thing. Or, R. Resin of Fallap gr. xvj. Mercurius dulcis, Cinnamon, A. ℥ss. mix them, Or a Syrup of the

Decoction of *Lignum Vitæ*, with Sena, Turbith and Agarick: Or, R. Rhubarb inspisate juyce of Roses, Cistron, white and black Myrobalans, Resin of Fallap, A. ℥jss. with Honey of Roses, make Pills: Dose ℥ss. Bleeding must be shunned, because the strength is not only dejected by the long continuance of the Disease, and the Body wasted: but also least the humours should be recalled into the Veins, and so Pollute and corrupt the Blood. § 2. You may make Revulsion by proper Emetics: Cupping-Glasses applied to the Shoulders and Back: by Frictions in the upper parts: and by proper Ligatures. For a Vomit the *Dasarum* of Fernelius is good, so also *Sal Virosi*, and the *Sal Tartari Emeticum Mynsichti*, &c. § 3. After these evacuations to make a farther Revulsion, you must expel the remainder of the evil humours by Discussion or a Sudorifick means: which may well be done by the *mixtura simplex*, *Tinctura Diaphoretica Paracelsi*, or the *Decoctum sudorificum Emperici Germani*, Bezoar-Stone, and Bezoar-Mineral: or by a Decoction of Guajacum, China, and Lentisk-Wood. Or you may cause Sweat by S.V. in Hartmans Chair: Or by a proper Sulphurous Bath: Or by the Banian now erected in London, which is the most excellent and famous way of Sweating, that was ever yet invented. § 4. You must provoke Urine, that the thin, wheyish humours may be derived by the Reins: For this purpose, Galen used a Decoction of *Asarum* and *Smalage* in fair Water. *Riverius*

commends this, *Rx* Roots of *Asarum*, and of *Smallage*, *Ana.* ʒj. leaves of *Soldanella*, *Calamint*, *A.* M. j. *Elder-flowers*, *Canomil-flowers*, *A.M.* ss. *Polypody*, *Carthamus* seeds, *A.* ʒss. *Water* q. s. boyl to a pint, and then strain it. Dose ʒv. in a Morning fasting. And to make a more firm Diversion, you must make Issues in the Legs and Thighs. § 5. *These things being done, you must give things to dry and strengthen the Womb*: For this purpose the Root of *Dropwort* is very much commended, the Pouder of Mans Bones, the Ashes of Capons dung in Rain-water, *Chalybeat* Milk taken for forty days together, adding towards the end of the time a little fine *Bole* or *Terra sigillata*, *Coral* and *Pearl* prepared, *Mithridate*, *Venice Treacle*, *Our London Treacle*, *Conserve of Roses* and of *Wormwood* alone or mixt with *Treacle*, *Conserve of Comfrey-roots* and *Citron-peels*, *A.* ʒj. mixt with *Red Coral* burnt, fine *Bole*, *Terra Sigillata* and *Dragons Blood*, *A.* ʒj. and made into an *Electuary* with syrup of red *Roses* dried: *Pouder of Sage*, *Rosmary*, *Amber*, *Sassa*, and *Balaustians*, taken every Morning in Broth: A *Juleb* of *Poppy* and *Plantane-water* with *Syrup of Myrtles*, Or this of *Mercurials*, with which he has cured many Women: *Rx* Decoction of *Oak leaves* ʒvj. *Rennet of a Hare* ʒi. mix them for a Dose, and give it for ten days: and that nothing might be wanting, to these here enumerated you may add all those which we have specified *sect. 22.* § 2, 3, 4 and

5. *foregoing.* § 6. For *Topicks*, you must make an *Injection* with our *Aqua Ophthalmica*, five or six times a day: than which there is no better thing: after which you may make a *Suffumigation* with *Frankincense*, *Labdanum*, *Mastich* and *Nutmegs*, to be received up by the *Womb* by a *Funnel*.

LXXXII. Rage or Madness of the Womb.

§ 1. *As in an ordinary Mania or Furor, so in this, Bleeding is thought by many Physicians to be absolutely necessary, if it can be said to be necessary in any Disease: and they advise often to draw Blood, even as far as the Patients strength can bear; for thereby (say they) the whole Mass of Blood, and the Womb it self is cooled: However if the Courses be stop't they ought to be provoked; and where the Hemorrhoids have been accustomed, if they bleed not of their own accord, they ought to be opened with Leeches.* § 2. *This done, you must purge, chiefly if the Body abounds with hot and adust humours. But first for to prepare the Body, you will do well to give cooling and opening Julebs, in which a little spirit of Sal Armoniac, or its Volatile Salt may be put: these may be used for three or four days together: then give gentle purges at first, as the Tinctura Cholagogæ or Melanagogæ Graliegij; afterwards such as are more strong, viz. such as we have prescribed in the Cure of Madness and Hypochondriack Melancholly.* § 3. *Next give Alteratives, which cool both the whole*

whole Body and the Womb : as *Whey alone, or sweetned with Syrup of Corals*: Here take place, Lettice, Purslane, Water-Lillys, Navelwort, Willow leaves, Poppy seeds, Poppy water, juyce of Poppies, an Emulsion of the four cold seeds, Cucumers, Melons, Pom-pions, *Saccharum Saturni*, Opium, and all Narcoticks : Julebs made sower with Juyce of Limons, or Oyls of Sulphur or Vitriol : If the Raving be extream, you must give things which cause sleep both inwardly and outwardly, such as we have prescribed in cap. 29. sect. 5. § 3. 2. foregoing. § 4. *These following things are said to be specifics, or to act by an occult or hidden quality*: Hemlock, Henbane, Rue, *Agnus Castus*, *Sal Prunella*, *Saccharum Saturni*, Camphir, Hemp : which things as some Authors think ought rather to be used in Nunneries. § 5. *For Topicks, you must use such things as cool and abate Lust, which are to be applied to the Loyns, Share, Privities, Perinaeum, and Anus*. But first during the whole Course of the Cure, you are to give cooling Clysters, and such as gently purge : but beware of sharp Clysters least they make the Symptoms worse. A Clyster of Poppy-Vinegar and Poppy-water may do good : likewise the same injected into the Womb is prevalent, more especially if *Saccharum Saturni* be mixed therewith : Or inject with *Sacch. h.* dissolved in juyce of Poppies or Nightshade, mixt with Plantane Water : you may anoint with *Unguentum Album Camphoratum*, *Populneum*, Oyl of Poppy-seeds and of Henbane-

seed : Or Bath with the juyces of Poppies, Nightshade, Purslane, Lettice or Henbane, in which *saccharum Saturni* and *Sal Prunella* are dissolved. § 6. *As to the conjoynd Cause, there ought to be an evacuation of the sharp and corrupted seed* : That this may be done, there ought to be a Friction of the Genital parts by the Midwives hand : Or the Sick being put into a Bath of fair Water, the cold being just taken off, her belly is to be rub'd about the region of the Womb, not coming near the Privities : so will the luke warm water cause an evacuation of the Seminal matter, the Womb being only a little opened with the Fingers : Or which is best of all, let her (if it may be) be married forthwith to a lusty young man : for so the offending matter contained in the Vessels being expelled, the sick will be cured : if this dos not, the sick is hopeles. Lastly, to purge out the Seed, *Riverius* commends this : *R. Venice Turpentine ʒiij. Agrick Trochiscated ʒj. Carrotseed, Hempseed, Lignum Aloes, A. ʒss. with Sugar make a Bolus.*

LXXXIII. Barrenness.

§ 1. *If it be caused from a Closure of the Womb from the Birth, it is to be artificially opened by Instrument* : If it be from Tumors, Ulcers, or Excrescencies, in the Neck, the Cure must be directed to them : If it be by straitness of the Genital parts by reason of Youngness of Age, it ought not to be medled withal, for as Age increases there will be a sufficient Witness : Moreover too soon use of those parts in Youth

Youth, spoils their natural Constitution ; but none of these things are properly called Barrenness. § 2. *If it be for want of Monthly Courses, all ways and means are to used to procure them, such as we have taught in Sect. XXI. Of this Chapter.* § 3. *If it comes from too great Corpulency, it is to be remedied by convenient evacuations, and an Extenuating Diet :* but if it be from a bad Course of Diet as too much Eating or Drinking, or Drunkenness, or from drinking of Water, the course of Living must be altered, and a good Diet instituted : If it comes from too great Age, it is incurable ; yet while the Courses flow, the hopes of Issue are not past. § 4. *If it be caused through Witchcraft, or Charms, or the occult power of Medicaments : There are certain Amulets, which Authors say, have a peculiar and specifick Virtue to resist the same.* Cardan affirms, That the Pizle of a Wolf worn about the Woman, will make Void all Inchantments and Bewitchings. Others commend the Adamant and Hyacinth Stone : also Hypericon, which the Antients called the Devil-driver : To which add a draught of cold Water, fallen from the Mouth of a Stone-horse, drinking in a Current, and suddenly received in a Vessel ; Red Coral, Vervain, Squils, Eryngus, Sagapenum, Rue, &c. to be worn by Man and Wife. But the only great and chief Remedy is Faith in God, and by the Virtue thereof to have recourse to the Throne of Grace and Sacred Majesty of Heaven, by humble

Supplication and Prayers, so will Help be drawn down from the Almighty. § 5. *If it be caused by reason of an Hæstic or Consumptive constitution, you must cure it, by altering that habit, as in its place we teach.* § 6. *If it be from Distemper of the Vessels dedicated to Generation : the Cure must be turned against the Distemper of the Womb.* § 7. *If it be from a defect of the Seed : you must give all such things as are seed Increasers, as Roots of Saryion, Eryngus, Parsnips, Blood and Salt of Saryion, Oysters, Lobsters, Cockles, Perwinkles, Pistachios Nuts, Confectio Alkermes, Seeds of Ammi, Muskadel with a Toast, Juyces and Gravies of Meats, not fully roasted or boyled, Matrix of a Hare, Stags-Pizzle, Liver and Stones of a Boar-Pig, Lamb-stones, and Stones of a Ram, Musk and Ambergrise, which are miraculous, &c.* But Mint, Rue, Agnus Castus, Willow leaves, Camphir, and a Goats Commodity, are to be Interdicted, because they either Corrupt or Consume the Seed. § 8. *If it be from the Womb not attracting the Seed by reason of too much Fat, or Tumors, or Ulcers, &c.* they are to be remedied, as in their respective places we have taught. § 9. *If it be by reason of the slipperiness of the Womb, you must give universal cleansers, then such things as cleanse the Womb ; after dryers and strengtheners : Lastly, Topicks, as an Injection astringing, repelling, and drying those parts. This cleanses the Womb :* R. Diaphanicon, Hiera simple, A. ʒi. Turpentine, Honey of Mercury, A. ʒvi.

A. 3vj. *Castoreum* 3j. mix and make a Pessary : but if the Womb be very foul, R *Juyces of Wormwood, Mugwort, Savin, A.* 3ij. *Colocynthis* gr. xv. Troches of *Agarick, Myrrh, Ginger, A.* 3ss. *Sugar of Roses* q. s. mix and make a Bole for two Doses : then to strengthen the Womb, R round *Birthwort, Xyloaloes, Gentian, Zedoary, Virginia Snake root, A.* 3j. S.V. 1bij. make a Tincture to be given ad 3j. Morning and Evening. Outwardly inject into the Womb Our *Aqua Ophthalmica*, three, four, or five times a day, then make a Fumigation of *Myrrh, Frankincense, A.* p. j. and *Nutmegs* p. iij. cast upon live Coals. § 10. If it be from a cold and moist distemper of the Womb, causing the Womb not to retain the seed cast in ; you are first to cleanse the whole Body with this : R *Agarick, Hiera, A.* 3j. *Mercurius dulcis* 3vj. *Scarmony, Colocynthis, A.* 3iv. *Senna* 3ij. *Rosin of Fallap* 3j. *Pepper* 3ss. mix and make a Pouder : Dose à 3j ad 3ls or 3ij in strong bodies : Or you may give the *Tinctura Catharrica Cl. f. f. i.* or *Catholica Grukingij*, or *Pblegmago-ga* of the same Author. § 11. Secondly, You ought to cleanse the Womb it self by proper specifics, among which are Decottion and Tincture of *Colocynthis*, mixt with Tincture of *Myrrh and Castor*, which ought to be often given till the habit both of the whole Body, and of the Womb are apparently altered, and the Womb it self thoroughly cleansed, and the cold and moist humour evacuated : But that this may be more ef-

fectually done, you are also to give Diuretick and Sudorifick Medicaments, which with the Womb Purgers may be given alternately. § 12. Thirdly, If withal there be the Whites, you are to make proper Revulsions by Emetics, Ligatures, Frictions, and Cupping in the upper parts : Issues in Neck, Arms and Thighs : as also derivation by proper Catharticks and Laxative Clysters : after which you must use things which strengthen, as *Confectio Alkermes, de Hyacinthio, Mithridate, Venice Treacle, &c.* and for Topicks you must inject into the Womb five or six times a day, Our *Aqua Ophthalmica* aforementioned, and make a Suffumigation with Pouder of *Nutmegs*. § 13. Fourthly, All these things being thus done you must give specifics to strengthen the Womb and help Conception. And first we commend the Blood or Essence of *Satyriion* given ad 3j or the Salt thereof given ad gr x. in a glass of *Muskadine*, after the Courtes are come down : Root of *Eynagus* condited is a good thing : so also Essence of *Parfnips, Green-Ginger* candied : Pouder or Ashes of a Bulls Pizzle : Preserved *Nutmegs, Seeds of Rocket, Siler Montanum, wild Parsnip, and of Ammi*, which last, as *Mathiolus* upon *Diascorides* saith, Does exceedingly help the Barreness of Women, and that many have been made Fruitful by the only use of this Seed. Shavings of *Ivory* given ad 3j in White Wine : Pouder of the Liver and Stones of a Boar Pig : After-birth of a Woman, dried, pou-

dred, and given to ℥j. distilled Oyl of delicate sweet Marjoram, mixed with the Rennet of a Hare and a little Musk, which, *Pena* and *Lobel*, say is a secret not to be communicated to any living Creature. *Acus* commends the juyce of Sage drunk to this with a little Salt, upon the fourth day of the monthly Purgation, a quarter of an hour after which she ought to have Coition with her Husband. Some advise to take the following for nine or ten days together: ℞ *Eringo-roots* ℥j. sweet Marjoram, Sage, Nep, Mugwort, A.M.j. boyl in White Wine, give this or more Morning and Evening with Tryphera Magna (without Opium.) Or this, ℞ *Green Ginger* candied, preserved Nutmegs, Sasyrion preserved, Filbert-kernels, Pine-nuts, Pistachios, A. ℥iv. Confectio Alkermes ℥iij. Seeds of Rocket, Siler Montanum, Ammi, Water-creffes, wild Parsnep, Cinnamon, A. ℥ij. Matrix of a Hare, Bores stones, Stags Pizzle, Cloves, Mace, inspissate juyce of Sage and sweet Marjoram, A. ℥j. Afterbirth of a Woman, Oyls of sweet Marjoram and of Sage distilled, Musk, Ambergrise, A. ℥ss. with Blood of Sasyrion q.s. make an Electuary: Dose à ℥j. ad ℥iij. Morning and Evening in Rich Canary. Or this distilled water which is very effectual: ℞ *Cinnamon*, Cloves, Nutmegs, Mace, A. ℥j. Cubebs, long Pepper, Galangal, Zedoary; Juniper-berries, seeds of Ameos, Seseleos, A. ℥ss. Waters of Rosmary, sweet Marjoram, Baum, White Wine, A. q. s. digest six days and distil: Dose

Morning and Evening three Spoonfuls; the Quintessences of Rosmary, Sage, and sweet Marjoram are great secrets in this Cure: so also the Powers of Oranges, Limons, and Our Quintessentia Virtutum. § 14. Strengthen the Womb by an Injection thus made: ℞ *Aqua Ophthalmica* Noſt. choise Canary, A. thiss. S.V. ℥iij. Ambergrise, Musk, A. thiss. mix them: after let the Womb receive this Suffumigation: ℞ *Troches of Gallia and Alipta Moschata*, *Lignum Aloes* and *Rhodium*, Cubebs, Cloves, Nutmegs, A. ℥ij, Amter, Tacamahacca, Mace, Benjamin, Oubani, Gum Ammi, Myrrh, A. ℥j. make a Powder for a Fume: and with the same with Orange-flower-Water, you may make a Pessary for the Womb in a fine linnen rag: But Garlick beaten with Oyl of spice made into a Pessary in a Linnen Rag, and put up far into the Womb, powerfully brings down the Courses being stoppt, cleanses the Womb, recreates it and strengthens it, so that many thereby have been brought to Conceive, who for a long time have been past all hope.

LXXXIV. Mola, Or false Conception.

§ 1. In the Cure hereof you must use often and strong purging, joining with the purgers Hystericks: among these purgers Decoction or Tincture of Colocynthis is the most famous: or the Pilule ex duobus. § 2. You must strongly provoke the Courses or Terms, for what procures them expels the Mola: for this purpose you may use the Garlick aforesaid, and those

those things which we have advised in Sect. 21. foregoing. Or this of *Zacutus*, R *Euphorbium* ʒj in Powder and with Syrup of *Mugwort* q. s. make Pills. These being taken at four times in 12 hours space, brought away eight Mola's. § 3. If these things do not, you must come to Chyrurgery, and so pull it forth with the Griffins Talons, or Hooks fitted for that purpose.

LXXXV. Abortion or Miscarriage in Child-bearing.

§ 1. The Cure of this is considered as it has relation to the time before the Woman is with Child; and to the time after. § 2. In respect to the time before, those things which are wont to cause Abortion are to be removed, as Distemper of the Womb cold and moist, slipperiness of the Womb, pain and weakness of the Womb through strength of the Expulsive and weakness of the Retentive Faculties of the Womb: plenitude of bad humours, Tumours, Ulcers of the Womb, and such like: How all these are to be cured, we shall refer you to their several Titles or places, where we have discoursed of them at large. However convenient and frequent Purging, Diureticks, Sudorificks, and proper dryers are necessary: also Issues made in the Arms and Thighs, are said to be very effectual to prevent Abortion. because they divert a multitude of evil humours, which being accustomed to have their Course by the Womb, would certainly kill the Child. § 3. In respect to the time after Conception, the same Causes being present, the cure is the more diffi-

cult. First, if there is a plenitude of bad humours, you must purge, but with gentle things, and often to be repeated. § 4. Secondly, if there is a cold and moist distemper of the Womb, after gentle purges often repeated, you must come to a Sudorifick diet, which may strengthen and gently dry. § 5. If it be from taking cold, you may foment the Region of the Kidnies, Womb, and Share, with a Decoction of Camomil in Red Wine, mixed with a quarter part of S.V. giving inwardly gut. xij of our *Liquor Vitæ Anodynus*. § 6. If it be from a sudden fright, you may use the fomentation aforesaid, and give inwardly *Confectio Alkermes* of Our prescription with a little Oxycrate. § 7. If it be from sounding, you must give the aforesaid *Confectio*, or that of *Hyacintho*, either alone or in some proper Vehicle, as Red Wine mixt with a little Quintessence of Mint. § 8. If it be from a simple flux or Dysentery, you must have respect to the Cure of those Diseases, wherein drying Meats and Medicines are to be administered, the Sick kept in Bed, and such things as are Cordial and strengthening often to be administered. § 9. But in the general course of this Cure, and whole time of the Womans going with Child, astringent and strengthening Medicines, which have a power to prevent Abortion, are to be used, such as we have mentioned Sect. 22. § 2, 3, 4. foregoing. To which you may add these following: Plantane Seed, or Grains of Mastick given to ʒj in the Morning fasting. in Canary, or Mallago, or Red Wine,

Wine, or in the yolk of an Egg. Coral and Pearl prepared mixt with Conserve of Roses, and Syrup of Quinces. Decoction of Tormentil-roots sweetned with Conserve of Roses. *Pulvis Granorum Chermes compositus* given ad \mathfrak{z} ij or \mathfrak{z} j. *species cordiales Temperatæ*, *Pulvis Dysentericus Crollij*, *Pulvis Cardiacus Magistralis*. Or this, \mathfrak{R} Chermes berries, Tormentil roots, red Coral prepared, *A. \mathfrak{z} iiij.* Pearl prepared, Date-stones, *A. \mathfrak{z} ij.* Mastich, Nutmegs, *A. \mathfrak{z} j.* make a fine Powder: Dose ad \mathfrak{z} j or more. § 10. Outwardly anoint with *Unguentum astringens* and apply *Emplastrum ad Herniam*: or that mixt with *Emplastrum Metroproptoticon* or *Hystericum*: let them not lye on long together, for then they heat the back and cause sharpness of Urine. § 11. But if notwithstanding all these things the Woman is ready to Miscarry which is known by pains and throvs in the lower part of the Belly, about the Share; and in the Loyns, about the Os Sacrum, you must immediately seek to mitigate and stop them: if they are excited by Wind and Crudity, give *Aromaticum Rosatum* mixed with Coriander Seeds, Ana. Or *Aqua Imperialis* after Swallowing *Laudanum* gr. j. Outwardly anoint the Navel and Belly, with Oyls of Anniseed, of Juniper berries or of Amber: and apply after Camomil fried in a Pan with S.V. to the Region of the Womb. § 12. But if by this means the pain will not cease, but the Courses or Blood begins to come away, you must exhibit a Clyster of Wine and Oyl: or of Milk in which *Philonium Ro-*

manum \mathfrak{z} ij. or *Liquor Vitæ Amodynus \mathfrak{z} ss.* and inwardly by the Mouth you may give *Diacodum* of all sorts, *Pulvis Haly*, *Syrupus de Meconio*, *Nymphææ*, *Laudanum* gr. ij or iij dissolved in Sack: also Cupping-Glasses may be applied to the Shoulder-blades, under the Duggs and under the short Ribs: and Frictions and painful Ligatures to the upper parts: and if the flux of Blood still continues give juyce of Plantane with Syrup of Poppies \mathfrak{z} j mixed with fine Bole or *Sanguis Draconis*. Outwardly apply this: \mathfrak{R} *Olibanum* poudered \mathfrak{z} ij. Whites of Eggs N^o. v. keep them continually stirring upon hot Coals that they clodder not, to which put a little Turpentine, to cause them to stick: spread it on Tow, & lay it on the Navel as hot as may be endured, every Morning and Evening, for 4 or 5 days. § 13. These things following are used as Amulets to retain the Child in the Womb. An Eagle-stone worn about the Neck, a Load-stone applied to the Navel, Coral, Jaspers, Emeralds, Bone of a Stags heart, worn under the Armpits, or hung about the Neck: to which add a Girdle made of Sea-horse Hide, or of a Wolf-skin, commended by Zacutus; lib. 2. obs. 152. the leaves or Hypericon-roots, Vervain, Wild Tansey, and Burdock.

LXXXVI. Hard labour or difficulty in Child-bearing.

§ 1. This is performed in part as we have taught in cap. 16. sect. 4. foregoing, but if the Birth proves very difficult these following things are to be observed. § 2. First give inwardly *Confectio Alkermes* ad \mathfrak{z} ss. or *Cri-*

nationi

*namon in Pouder with a little Saffron in Cinnamon water : also Saffron alone ad gr. xij. Or R^x Cinnamon, Saffron, Birthwort, Myrrh, A. gr. xij. make a Pouder and give it in Oyl of Sweet Almonds, Syrup of Maiden-hair, and Rhenish Wine, A. ʒij. Or give Oyl of Amber ad gut. xij or xvj : Or the Quintessence thereof ad ʒiij in Rhenish Wine : Or the Extract of Saffron, ad gr. 6. or of Cinnamon ad gut. vj mixt with Sugar, and then with Rhenish Wine : Or which is in *star omnium Pulvis partum provocans.**

§ 3. Secondly, *Anoint the Womb with Oyls of Roses, Camomil, Lillys, sweet Almonds, &c. and the Navel and Region of the Liver and Spleen with Oyl of Amber, or the Gall of a Hen or Partridge.*

§ 4. Thirdly, *fasten to the Hips or Thighs, Storax, or the Lead-stone, or an Eagle-stone, for that they have a specifick Virtue to hasten and facilitate the Birth ; so also the Eyes of a Hare taken in March, drawn out of the Head intire, and dried with Pepper ; one of these Eyes are with Pepper to be so tyed to the Belly, that the sight of the Eye may touch it ; the Child being Born, it is to be removed, least the Womb also comes out : but all precious Stones whether in Rings, in the Ears, or else where are to be laid aside, because they hinder the Delivery.* § 5. Fourthly, *when you see the point of Birth approaches, cause the Woman to sneeze, for it helps to force away the Birth, as Hippocrates, sect. 5. Aph. 35. has taught : you may do it with*

Pulvis sternutatorius Ru landi, abating the Musk, and putting in the double quantity of Castoreum.

LXXXVII. A Dead Child.

§ 1. *The Cure consists in Exclusion of the Dead Child, which ought to be speedy, because so long as it is in the Womb, the Mother's life is in apparent danger : and this is to be done by those remedies which force a Mola, and hasten and facilitate the Birth in hard labour.*

§ 2. *But if the Woman be strong, you ought to evacuate the humours collected by a purge : Or, as Angelus Sala advises to give Mercurius Vitæ to gr. iv. which he often gave with good success, as a most powerful thing to expel the dead Child, and excelling all other things for that purpose.* § 3.

The evil humours being evacuated, you may give pulvis partum provocans, of our prescription. Or this, R^x round Birthwort Roots, Dittany of Crete, dried Savin, Troches of Myrrh, Castoreum, Assarum-Roots, Saffron, A. ʒj. Borax ʒij: make a fine Pouder which give in Savin Water ad ʒj. § 4. Anoint the Privities, Share, and Perinæum with Unguentum de Artanita : Or, with Bulls Gall ʒiij. in which Tincture of Colloquintida ʒj. is put : and then put up Pessus aperiens Mynsicht, made up with Ox Gall instead of the juyce of Mugwort. § 5. If all these things do nothing, you must extract the Dead Child by the help of Chyrurgery, as we have taught in cap. 16. sect. 2. Of this Book.

LXXXVIII. Symptoms in child bearing.

§ 1. *An untimely flux of Blood before the Birth. If it be long be-*

before the time, it is a sign of Miscarriage, and ought to be cured as we have taught in *sect.* 85. § 9, 10, 11, and 12. all things which empty and evacuate, and the cold air, are to be shunned: such things, as are Cordial and strengthening are to be given: and when the Mouth of the Womb opens itself, the Membrane must be broken, and the Child taken forth. § 2. *Retention of the Afterbirth.* It is expelled by the same things which provoke the Terms, hasten the Birth, and expel a Mola and dead Child: but these things following are accounted as specifics: the Eyes of a Hare taken in March (see *Sect.* 86. § 4.) Oyl of Juniper-berries, which *Rulandus* gave to gut. xxx. Quintessence or Powers of Juniper given in Rhenish Wine or *Hippocras* ad ʒss or more. A *Secundine* dried and poudred, and given ad ʒj in Rhenish Wine: *Mercurius Vitæ* given ad gr. iij or iv by the advice of *Angelus Sala*: Juyce of an Onion given ad ʒj in warm Wine: The Stones of a gelded Horse cut in peices, dried, and poudred, given ad ʒij, iij or iv in Chick-Broth, and several times repeated: Juyce of Lovage alone or with as much juyce of Savin given ad ʒij in Rhenish Wine: Juyce or Decoction of Camomil in Wine, &c. If these things do nothing, you must have recourse to Chyrurgery, as we have taught it in *cap.* 16. *sect.* 5. of this Book. If it can by no means be drawn forth, but sticks strongly to the Womb, and there putrefies: you must put Suppuratives

mixed with Absterfives into the Womb, that what is putrefied may by peace Meals be brought forth; for which purpose *Unguentum Basilicon minus* ʒiij. mixt with *Egyptiacum* ʒij. is excellent, the Womb being first washed with an emollient and absterfive Injection, in which a little Oyl of Roles is put, to farther the Maturation. § 3. *Immoderate flux of the Loches, or Child-bed Purgations.* The Cure is the same with the immoderate flux of the Terms, the strongest of those Medicines being given: you must bridle the violent Motion of the Blood by such things as thicken and astringe, as *Laudanum Cydoniatum* given ad gut. xij or xvj in a Glais of Canary: or *Conf. Alkermes* mixt with Venice Treacle, Barly broth made of Water wherein Iron has been often quenched: If the Flux is very violent, threatening Death, give this, *R. Rose and Orange-flower-water, A. ʒjss.* Syrup of Coral or Myrtles ʒj. *Sal prunelle* ʒj. *sanguis Draconis* ʒj. mix for a Potion: if this does not, you must give *Pulvis dysentericus* Crollij, or *Laudanum Paracelsi* à gr. ij ad iv. dissolved in Canary. Outwardly, inject into the Womb Our *Aqua Ophthalmica*, either alone or mixt with juyce of Plantane, two or three times a day, then anoint the Womb, Reins, and Region of the Womb with *Unguentum Astringens* or *Comitissæ*, and at last, when all things fail, apply this Cataplastm: *R. pure soot from a chimney* ʒvj. *Powder of Toads* ʒiij. make them into a Pultise with the sharpest Vinegar, and apply it to the

the Reins of the Back. § 4. *Suppression of the Loches or Child-Bed purgations.* First give emollient, opening and purgative Clysters, as, *Enema Carminativum Mynsichti, & Emolliens Sobroderi*: and about seven or nine days after Delivery, she may be purged with the Infusions or Tinctures of Rhubarb, Agatick or Sena: Or with Tincture of Sena mixt ℥j or ij of Manna dissolved in Broth: if these things do not; apply Cups to the Groyns, Hips, and lower parts, open the Hemorrhoidal Veins if they swell: foment the Region of the Womb with an emollient and Hysterick Bath made of Water and Wine: Let her drink be *Decoctum Aperitivum majus* or *minus*, in which Saffron has been infused and *Borax* dissolved; and if a little *Schœnanth* be boyied in it, it will be so much the better. *Lastly*, if these things do not, you may have recourse to all the Medicines which we have mentioned in the cure of the Courses suppressed at Sect. 22. foregoing, where you have also Fomentations, Injections, Pessaries, &c. as also to these things at sect. 84. 86. and 87. which expel the Mola, facilitate the Birth, and bring away the Dead Child. § 5. *Gripings, Cholicks, or After-pains in Child bearing.* Let the Belly be well anointed with Oyl of Amber, laying over it a Flannel anointed with the same Oyl: and then let it be well bound up and swathed, that the Womb may settle: Inwardly give Quintessence or Powder of Juniper-Berries ℥ss: mixed with Ess Ventris ℥ss.

and by Clyster, a Decoction of Camomil-flowers in which *Laudanum* gr. viij. are dissolved: Immediately after Delivery give her Broth of an Old Cock three days together early in the Morning fasting, with a little Cinnamon and Saffron: and presently after the Broth, give this Powder in Broth (if there is a Feaver) or in Wine, (if there is none:) R *Comfrey Root* 3j. *Peach, Kernels, Nutmegs, A.* ʒij. *Amber* ʒss. *Ambergrise* ʒss. make a fine Powder: Dose 3j. If these things do not, you must pursue the Cure as we have taught in the Chollick, to which we refer you: Or give *Laudanum* gr. iij. or iv. dissolved in Sack, and then let the Woman repose her self. § 6. *Feavers and other acute Diseases of Women in Child Bed.* Let these proceed from what cause soever, you are to give openers the chief of which are Spirit of Sal Armoniack in Broth or some other Vehicle: Volatile Salts of the same, and of Harts-horn: Salt of Worthwood, Mugwort, and of Carduus, with other Alkalies which extinguish the preternatural heat of the Feaver: Sweet Spirits of Salt and of Niter are much commended in this Case, so also dulcified spirit of Sulphur and of Vitriol given in Wine, because they are suddenly mixed with the whole Sanguinous mass, and cause a kind of natural Refrigeration: but *Sal Prunella* is commended by some as the most admirable thing: If it comes from a suppression of the Child-bed Purgations: it is to be cured as we

have before taught : if from Wind and Vapours, you must give Carminatives, and gut.ij or iij. of Oyl of Amber : if from Milk, too much bred, you must give Sudorificks or Diurericks. If from a Collection of vitious humors, you are to consider whether the Child-bed Purgations flow naturally or not : if they do, you must omit purging, least Nature be diverted from her work : but if they do not, or the time of the flux is over, you may give purges, gentle ones first, and then stronger, with all which you ought to administer *Antifebricks*. And this note, That by how much the longer it is from the time of bringing to Bed, by so much the more safely may you admit of Purging, and contrariwise. And experience testifies, that a Woman wanting her Child-bed Purgations, if after the seventh or ninth day, she is taken with a Looseness, she for the most part escapes ; but if she be seized with it upon the first, second, third, or fourth days, she commonly dies.

LXXXIX. Omphalocoe, Exomphalos, A Rupture of the Navel.

§ 1. Enteromphalos, when the Gut slides into the Navel, is cured, first, by putting the Guts into their place. Secondly, by astringing the Peritonæum relaxt, and the consolidating of it, if broken, with Blood of Comfry, Essence of Sanicle, Rest-harrow, through Wax, Rupture-wort, with convenient Plasters, Ligature, and good Trusses : If Medicines will not prevail, at last you must come so Incision. § 2. Epiplompha-

los, when the Omentum or Caul falls into the Navel, is cured as the former : Our Emplaster of an Ox Gall is a specifick here,

§ 3. Hydromphalos, a watery Rupture of the Navel, is cured by things drying and discussive : R̄ Bean Meal ℥iij. Barley Meal ℥j. red Wine q.s. boyl to the thickness of a Cataplasim : with which mix Powder of Medlicot and Camomil flowers, A. ℥ss. Oyl of Roses and Camomil, A. ℥j. distilled Oyl of Juniper-berries ℥ij. the white and yolk of one Egg, make them into a Cataplasim, and apply it after a discussive fomentation. If these or some such like prevail not, you must make use of the *Paracentesis* which is taught in cap. 15. sect. 21. but some Authors advile to make an Incision like to a half Moon. § 4. Anemomphalos, a windy Rupture of the Navel: In Children it is easily cured with Discussives and a good Truss : so also in Elder persons, but with much more difficulty : for the Cause or Wind lying in the Bowels, is to be cured first as we have taught in the Section of the Chollick. § 5. Sarcomphalos, a fleshy Rupture of the Navel is only to be cured by Chyrurgery, wherein the flesh must be taken away by a Caustick Medicament or Burning Iron, but you must be cautious that it degenerates not into a Cancer, for than it will be incurable, and the sick will dye of it. The rest of the cure seek out of cap. 14. sect. 13, 14, 15, 16, 17, 18, 19. cap. 22. sect. 5. cap. 31. sect. 26. § 1, 2, 3, 4. foregoing.

XC. Sciatica, Or the Hip-Gout.

§ 1.

§ 1. This Disease is cured by giving first strong Purgers as Pil. ex duobus with ☿ dulcis, or Aggregativa with the same or the Hologagie Pills which are a famous thing: to which add Caryocostinum, Pills of Hermodacts, Pulv. Arthrit. or of Hermodacts Compound, Confessio Hamech, Tinctura Cathartica cloffe, & Catholica Grulingij, Tincture of Colocynthis. § 2. Secondly, by Emeticks, Vinum Benedictum is good, so also Crocus Metallorum in substance, Sal Tartari Emeticum Mynsichtes. Or this: R̄ Crocus Metallorum, Cremor Tartari, A. ʒj. Scammony ʒij. make a fine Powder: Dose ʒj. with this very Medicine I perfectly cured a Sciatica in a Woman at four times taking. Or, R̄ Crocus Metallorum, Tartar Virriolate, Scammony, Gutta Gamba, A. ʒj. mix and make a Powder: Dose ʒj. give these with Salt Broth, and be careful of the Sick, they are good Medicines but strong. Or, R̄ Crocus Metallorum, Cremor Tartari, Scammony, Colocynthis, Gutta Gamba, A. ʒj. mix and make a Powder: Dose a gr. xxviij. ad xxvj in strong Bodies § 3. Make Derivation by strong sharp Cathartick Clysters to be repeated every other or third day, through the whole course of the Cure, you may give the Carminative Clyster of Mynsicht with ʒiij or iv of the Infusion of Crocus Metallorum, or with ʒj of the Tincture of Colocynthis. § 4. If the pain be violent, you must be forced at Night to give gr. iij, iv or v. of Ludanum dissolved in Sack, and make the sick to sweat upon it, and if the pain continues you may the next day about Noon exhibit a Clyster of

Milk, with ʒis of our Liquor Vitæ Anodynus: Authors think, That this Clyster may be so much the more advantageous, if a Cathartick Clyster was exhibited a while before hand. § 5. You may also divert the humor by making Issues: Zacutus lib. 2. obs. 160. saith, That he did it with wonderful success behind the Ears when the humor come from the Head: and it may be done with vast advantages if one be made with in the Inside of the Thigh or Legg near the Ham, and especially by burning with a red hot Iron, even to the very Bone: this Operation has done when all other things has failed. § 6. As for Topicks, you may foment the part with some discutient Decoction: or apply hot to the place Juniper-berries or Camomil beaten and fried in a Pan: Or anoint the part with Oyls of Dill, Camomil, and Rue mixt with a half part of Oyl of Juniper-berries: Or with Oyl of Scorpions so mixed with Oyl of Juniper-berries: if you would resolve more powerfully, you may anoint with the Quintessences, Powers, or Oyls of Amber, Rosmary, and Oranges either simple, or mixt with Oyl of Earthworms, Foxes, or of Whelps: Or anoint with Oleum Philosophorum alche. after five or six Cupping-Glasses have been affixed to the part, it has cured a stubborn Sciatica in one day. Or apply a Loaf out of the Oven slit in two sprinkled with Oyl of Amber, as hot as it can be indured: Leeches in number viij or x. may be fastned to the part, and Zacutus saith, Fff 2 That

That in ten hours space he took away the pain of the Sciatica; when all other remedies failed: Or you may apply a Cataplasim of *Ibern* or *Sciatica Cresses*, which is commended as an effectual cure of this Disease. You may make it thus: *Rx Sciatica Cresses* M. iv. *Winter cresses*, *Dittander*, *A. Mij.* boyl in wine q. s. to softness: to which add Oyl of *Juniper-berries*, and of *Whelps* A. $\frac{3}{4}$ j. powder of dried *Rue*, *Camomil-flowers*, A. $\frac{3}{4}$ ij. *Ginger*, *Zedoary*, A. q. s. mix and make a Cataplasim. Some beat the *Sciatica cresses* to a mash,

so apply them alone and let them lye for three or four hours. § 7. If the Disease does still continue and proves very stubborn, you must apply a Vescatory to the part afflicted, and keep it long open, that the Morbifick matter may be drawn forth: at last heal it up; and making a large Cerecloth with *Empl. de Minio* upon new linnen Cloth, so large as that it may go round the whole Body, apply it hot to the place, sew it fast on, and let hang there till it falls off. If this first Emplaster does not perfect the Cure, you may apply a second in like manner.

CHAP. XXXII.

Of Diseases afflicting the whole Body.

I. **X** *Aegoris*, *Chlorosis*, *Icterus* & *febris alba*, *The Green-sickness*.

§ 1. The Indications of the Cure of this Disease are four fold, First, opening of Obstructions: Secondly, emptying of the vitious humors from the whole Body: Thirdly, Provoking the Terms: Fourthly, correcting the distemper of the Bowels and strengthening of them. § 2. The first Indication is answered by opening of the Obstructions of the Liver and Spleen as we have taught cap 31. sect. 9. and 11. mixing with the same Hystericks, or such things as respect and open the Veins of the Womb: you may exhibit a laxative Clyster first; then give proper Aperitives designed. § 3. The second In-

dication requires evacuation; you are first to purge gently with things proper for the constitution, by way of Apozeme: Or you may give the diet mentioned cap. 26. sect. 18. § 16. Or the *Tinctura Catholica Grulingij*, which evacuate, and cleanse thoroughly; but it would be well if to the said Tincture or Diet, you add some proper Hystericks, as *Mugwort*, *Featherfew*, *Penny-royal*, *Motherwort*; and if the Spleen be obstructed things that respect *Hypochondriack Melancholly*. After purging, you may iterate the Aperitives again: let the sick sit in *Mynsichers Bath* made against the suppression of the Terms, adding to the said Bath, *Roots of Bryony* and wild Cu.

Cucumers, A.ſſij. by this means the Veſſels will be opened and looſned, and the matter cauſing the Obſtruction will be digeſted and diſſolved. The ſteeled wine of *Finkius* is an excellent thing to be given in this Diſeaſe: ſo alſo other Preparations of Steel, Vitriol and Tartar, and the *Pulvis Cachecticus Quercetani*: Or you may give *Fæcula Bryoniæ* with aſmuch Salt of Mugwort; Oyl or Liquor of Cryſtals: Powder of Sows or Hog-Lice, &c.

§ 4. The third Indication requires a provoking of the Terms, the which you may do by thoſe things in cap. 31. ſect. 21. aforegoing, and to which we ſhall refer you.

§ 5. The fourth Indication requires a correcting the diſtemper of the Bowels and ſtrengthening of them: which may be done with Decoction of *Guajacum* in a cold habit of Body, or with *China Sarſa*, and *Saffaſras* in a hot habit, uſing them for 3 Weeks or a Month, but withal giving every fourth or fifth day a purge to cleanſe the Bowels of that filth which cannot be expelled by Sweating: for this purpoſe the Sulphurous Baths to Bath with are good, and gentle Diureticks, as Tincture and Spirit of Tartar. Here alſo are commended Bezoar Stone, Extracts of Gentian, and *Scorzoneræ*, &c. § 6. If all theſe things do nothing, there is a neceſſity that the Patients ſhould be Married to a ſtrong, luſty and healthful Man; for by coition, the natural heat is excited, the Mouths of the Veſſels of the Womb opened, and that cure performed, which otherwiſe had been Impoſſible. § 7. Obſervati-

ons. A Maiden ſeven or eight years troubled with this Diſeaſe by reaſon of eating of Oatmeal was cured by taking firſt, Spirit of *Sal Armoniack* in Spirit of *Scurvy-graſs*, and drinking clarified Whey: afterwards by taking a Month together the Diet aforeſaid, and laſtly the Steeled Wine of *Finkius*. *Zacutus lib. 2. obſ. 99.* ſaith, That a Woman who for ten years had the Green-ſickneſs with ſtoppage of her Terms, and could not be cured by any means, was at laſt cured with nothing but Conſerve of Mugwort given thirty days together: given after it *Savin-water* in which *Rhubarb* had been for a whole night Infuſed.

II. *Kαχεξία*, Cachexia, Evil habit of the Body.

§ 1. The Cure hereof little differs from the Cure of the former Diſeaſe, for as much as it is cauſed from manifold Obſtructions: Yet theſe following things are particularly to be obſerved. § 2. Firſt, that after the general Intentions, ſpecial regard be had to the Cauſes from whence the Diſeaſe proceeds, that things oppoſing thoſe Cauſes may be adminiſtered. § 3. Secondly, to open particularly the Obſtructions of the Liver, which may be done with *Succory*, *Sorrel*, ſharp pointed *Docks*, *Wormwood*, *Germander*, *ground Pine*, *Fumitory*, *Tanſy*, *Agrimony*, *Liverwort*, *Xyloaloes*, *Barks* of *Caper-roots*, *Tamarisk* and of *Aſh*, with almoſt all Vegetables having bitterneſs or ſharpneſs, as *Centory*, *Carduus*, *Brooklime*, *Watercreſſes*, *Scurvy-graſs*, &c. and in particular, the Diet a-

forementioned in cap. 26. sect. 18.

§ 16. The Cachectick Powder of *Quecetan*: Or the same Powder p. j. mixt with *Cassia Lignea* p. iij. and treble refined Sugar p. iv. Or *Tragea ad Icterus Quercetani* given in Rhenish Wine à ʒj ad ʒij. To these add the fixed Salts of Herbs, the acid Spirits of Minerals, which exagitate the Mass of Blood, dissolve the Concretions thereof, open the places where it is obstructed, and cause its perfect Circulation every where. As also all the opening Preparations of Steel and Tartar, *Species Diatrion Santalon*, *Diarrhodon Abbatiss*, *Trochisci Rhabarbari*, Inspissate juice of Agrimony, *Diacurcuma*, *Dialacca*, Syrup of Wormwood, of Cichory, of the five opening roots, &c. § 4. Thirdly, To purge the Body by degrees and intervals of Time with Pil. *Hydropicæ Pontij*, and Tinct. *Senæ*. § 5. Fourthly, After purging, to provoke sweating with sudorifick Medicaments, chiefly such as are Antimonial: Or you may do it by an external Bath. The most excellent thing for this purpose is the famous *Banian* lately erected in London with the charge of many thousands of pounds. § 6. Fifthly, To strengthen and comfort the parts lately weakened, which may be done with Elixir *Proprietatis Paracelsi*: Or with this following Water: R. leaves of Wormwood, Centory, Tansy, Southernwood both sorts, Tamarisk, A. M. iv. green Walnuts ʒiij. green Ash-Kys ʒij. peels of Oranges N^o x. of Limons N^o iv. Snails, Earthworms prepared, A. ʒij. all being sliced, put

on them White Wine ʒviij. distil in a cold still to dryness: Dose ʒiij. sweetning it with Syrupus de quinque radicibus; Or with the Extractum *Ephrasticum*, which see in Our *Doron lib. 2. cap. 8. sect.*

§ 7. The Cachexia of Virgins is expelled by the distilled water of green Walnuts, cut into thin slices, steeped in White or Rhenish Wine twenty four hours sweetened with Canary, and exposed some few days to the Sun, being taken ad ʒiij. using exercise after it.

III. Σκελντῆς ἢ καὶ Σκουανγῆς, Scorbutus, the Scurvey.

§ 1. Its Cure of this Disease differs not much from the Cure of an Hypochondriack Melancholly, because it comes chiefly from the same humor; but more depraved from its natural state, and therefore for the most part needing stronger Medicines. The Curatory Indications are three fold: First, That which takes away the Antecedent or Morbifick cause of the Scurvy: Secondly, That which takes away the conjoynd cause or Morbifick matter of the Scurvy, considred in its Symptoms: Thirdly, That which strengthens the Viscera, & all the vital parts, restoring them to their Tone, and natural habit.

§ 2. These several Indications of Cure are to be considered in a twofold respect: First as they have respect to a Saline-Sulphureous intemperature of the Blood in a more cold Constitution: Secondly, as they have respect to a Sulphureous-Saline Dyscrasie thereof in a more hot Constitution.

In a cold Constitution.

§ 3. The first Indication consists in the proper exhibition of Emeticks, Catharticks, Digestives, and Antiscorbutick Medicines or Specificks. § 4. If the Ventricle be loaded and clogged, and there seems to be continually a great burthen at Stomach, with a nau- seousness, loathing, or striving to Vomit, you may first give an eme- tick, more especially if the sick is strong, and easily undergoes that kind of evacuation: In strong con- stitutions you may give an Infu- sion of Crocus Metallorum, Mer- curius Vitæ, Sulphur of Antimo- ny (but avoiding all Mercuriates as very hurtful) Sal Tartari Eme- ticum Mynsichti, &c. But in weak constitutions you may ex- hibit Oxymel Scylliticum, Vinum Scyl- liticum, or Sal Vtrioli, one Dose to be given in three several adhibi- tions. § 5. After you have done Vomiting, and the Stomach seems to be cleansed, you may come to the use of Catharticks; (but if there is no need of Emeticks, you may begin with purging first;) as, R^x Pilule stomachicæ cum Gummi Zij. Resin of Fallap ℥j. Tartar Vi- triolate gr. xvj. Oyl of Juniper ℥ss. Ammoniacum (dissolved in water of Earthworms) q. s. make sixteen Pills: Dose four at a time once a Week: Or R^x Cremor Tartari, Salt of self-heal, of Wormwood, A. ℥ss. Turt or Vitriolate, Diagrydium, A gr. vj. mix and make a Powder. Or, R^x Pills of Tartar of Bonius ℥jss. Refine of Fallap gr. xij. Tartar Vitriolate ℥ss. with Syrup of Buck- thorn make Pills, Or, R^x Pilule

Ruffi ℥j. Extract of black Hellebor ℥j. Salt of Tartar ℥ss. Ammonia- cum (dissolved) q. s. make nine Pills: or which take three for a Dose. Or R^x Sena ℥j. Rhubarb ℥vj. Mechoacan, Turbith, A. ℥ss. strings of black Hellebor ℥ij. Cor- tex Winteranus ℥ij. yellow Sanders ℥jss. Salt of Tartar ℥ij. slice, bruise, and digest in White wine or rather Rhemish ℥ij for two days: then strain: Dose ℥vj with Pulvis Ar- thriticus or Diasena. Or, R^x small Spirits of Wine ℥jss. Salt of Tartar ℥j. digest till it is yellow: decant it from the feces, and add, leaves of black Hellebor (macerated in Vine- gar) ℥j. yellow of the Orange ℥jss. yellow Sanders ℥j. digest close stopd, being warm for 3 days: Dose from half a spoonful, to a spoon- ful. Or, R^x Decoctum Epithymi ℥ijss. Sena ℥j. Rhubarb ℥vj. leaves of black Hellebor ℥iv. yellow peels of Oranges ℥ij. Infuse warm for one day, being close stopd, strain, and give ab ℥ss ad ℥vj. To these add, Pulvis Cornachini, Pulvis Catholi- cus Quercetani, Purgans Scheferi, Pilule Tartaræ Quercetani, de Am- moniaco Quercetani, Tinctura Ca- tholica, Phlegmagoga & Melanago- ga Grulingij, Cathartica Clossii. Some of these you may exhibit every, fourth, fifth or sixth day, according to Age and strength; for strong and violent purges, and too often purging is hurtful, destroys the strength, wasts the force of the Viscera, and yet takes not away the Disease. § 6. Mean season in the Intervals of purging, you must give Digestives and Antiscorbuticks, either alter- nately or conjoynd: R^x Cort. Win- teranus, Lignum Aloes, roots of the

lesser Galingal, A. ℥iij. Cinnamon, Cloves, Cubebs, A. ℥j. seeds of Watercresses, of Amicos, bruised, A. ℥ss. put upon them spiritus Vini Basilij, Or Aqua Philosophorum, (which see in Our Pharmacopœia) or spiritus Vini Philosophicus Kirkringij, (which see in Our Doron) so much as to over top them the breadth of three fingers: digest in a glass Vessel, in a sand Furnace for a week, then decant the Tincture for use. Dose gut. xx or xxx in Canary, or other proper Vehicle. Or R Virginian Snake-root, Contra yerva, Zedoary, Gentian, Bay-berries all being sliced, cut, or well bruised, Extract a Tincture as aforesaid, with one of the aforesaid Menstruums: Dose in Canary gut. twenty or thirty. Or R whitest Amber, Gum Hedera, Caranna, Tacamahacca, A. ℥j. Saffron ℥ss. Cloves, Nutmegs, A. ℥ij. Gum Guaiaci ℥i with the spiritus Vini Basilij, draw a Tincture, Dose gut. xx, as aforesaid. To these add the Elixir Proprietatis drawn with the same Menstruum, Tinctura Diaphoretica Mynsichti, & Diaphoretica Paracelsi, as also the Menstruums themselves given in due Doses, and in appropriate Vehicles. Here is also commended Tinctures of Salt of Tartar and Antimony, Cream of Tartar, Vitriolate and Chalybear Tartar, mixtura simplex, Salt and Tincture of Crystal, Essence of Fumitory, and Centory, with Salt of Wormwood.

§ 7. Antiscorbutick or specifick Medicaments in a cold Scorbut are such whose strength chiefly depends upon Volatile or flying Salts,

of which these following things are very full, and by which means they make thin and fluid, that thick, viscous, earthy and salt humour latent in scorbuticks, and at length discuss it. Among simples and officinal Compounds we have these. Roots of Radishes, wild Radishes, Butterbur, Elecampane, Zedoary, Vipers grats: Leaves of Scurvey-grass, Brooklime, Watercresses, Golden Rod, Scordium, Orange and Limon peels, Angelica, Arsmart or Pepperwort: Seeds of Mustard, Rocket, Wall-Rue, Cardamoms, Grains of Paradise: Berries of Juniper, Bays, Cubebs, Anacardiums: Lignum Guajacum, Gum, and Tincture of the same, Tincture of Tobacco, Gum Ammoniacum, Tincture of Gum Lacca, Antiscorbutick Water and Wine of Mynsicht, Electuarium Antiscorbuticum, Spirit of Scurvy-Grass, Elixir Proprietatis, prepared with Spirit of Scurvey-Grass drawn off a second time from fresh Scurvey-grass, Decoction of Wormwood, Essence of Pile-wort, &c.

§ 8. Among singular Compounds we have these: R juyces of Fumitory and Watercresses, A. ℥ij. juyce of Scurvy-grass ℥j. mix them. Or R Tops of Broom Mij, Brook-lime Mij, Wormwood M. j. boyl in Ale thiv. strain. and give ℥ij or iij. twice a day. Or R leaves of Sorrel M. ij. Watercresses M. iij. Whey thiv. boyl a little and strain: Dose ℥viij, twice a day. Or, R juyces of Watercresses, Brook-lime, A. ℥j. juyces of Fumitory, Scurvy-grass, Oranges, A. ℥ij. white Sugar ℥ss. mix them. Or R juyces of Scurvy

Key-grass $\mathfrak{z}\text{ij}$. of Brook-lime, of Watercresses, $\mathfrak{A}\mathfrak{z}\text{ij}$. of Wormwood, of Broom, of Limons, $\mathfrak{A}\mathfrak{z}\text{j}$. mix them: Dose $\text{ad } \mathfrak{z}\text{ij}$. But here by the way it is worthy noting, That Antiscorbutick Medicines will not endure boyling, for that their Virtues chiefly consists in their Volatility, which vanishes by that operation; and therefore for this reason, the juyces of the aforesaid Plants or their Conserves do work more powerfully than their Decoctions, in which their Volatile Salts are evaporated: And it is also to be observed, That Antiscorbutick waters made by distillation, are to be drawn without Fermentation, because by that operation also the Volatile Salts ascend and fly away: but to proceed. \mathfrak{R} Tinctura Diaphoretica Paracelsi, Rhenish Wine, $\mathfrak{A}\mathfrak{.}\mathfrak{lbj}$. juyces of Scurvey-grass and Brooklime, $\mathfrak{A}\mathfrak{.}\mathfrak{lb}\text{ss}$. mix and add thereto Powers of Orange-peels and Limon peels, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{j}$. Dose $\mathfrak{z}\text{i}$ or ij twice a day. Or \mathfrak{R} Tinctura Diaphoretica Mynsichti, juyces of Scurvey-grass, Watercresses, and Brooklime, $\mathfrak{A}\mathfrak{.}\mathfrak{lbj}$. Mustard seed bruised Horse Radish sliced, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{iv}$. Infuse 12 hours: strain, and give it $\text{ad } \mathfrak{z}\text{ij}$ twice a day. Or \mathfrak{R} Infusion of Mustard seed and Horse Radish roots sliced in Rhenish Wine \mathfrak{lbj} Water of Earthworms, juyces of Scurvey-grass, and Watercresses, $\mathfrak{A}\mathfrak{.}\mathfrak{lbj}$. juyce of Oranges $\mathfrak{lb}\text{ss}$. mix and give $\text{ad } \mathfrak{z}\text{ij}$ twice a day. Or \mathfrak{R} juyces of Scurvey-grass and of Oranges Ana, or instead thereof juyce of Wood Sorrel, mix and give $\mathfrak{z}\text{ij}$ twice a day. Or \mathfrak{R} juyces of Scurvey-grass, (depurated by being put into Glass close stopp and placed in a cold Cellar till it settles and grows

clear) \mathfrak{lbj} . put it into a warm B.M. in the Interim take fine sugar $\mathfrak{lb}\text{ss}$. dissolve it in as much Water of Earthworms, and boyl it up to the thickness of a Syrup, which mix with the aforesaid juyce of Scurvey-grass, and Powers of Oranges and Limons, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{ij}$. Or \mathfrak{R} Scurvey-grass, Brooklime, Watercresses, Broom-tops, Hydropiper, German-der, Aron, $\mathfrak{A}\mathfrak{.}\mathfrak{M}\mathfrak{.}\text{iv}$. Roots of Horse-Radish, of Aron, of Masterwort, Angelica, $\mathfrak{A}\mathfrak{.}\mathfrak{lb}\text{ss}$. middle Barks of Elder and Ash trees, Cortex Winteranus, Cinnamon, Cardamoms, Grains of Paradise, the yellow of fresh Orange and Limon peels, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{iv}$. Water of the leaves of Aron $\mathfrak{lb}\text{v}\text{ij}$. digest two or three days in a glazed pot close stopp, then distil in a common Still; the first and last waters being drawn off, let them be mixed together: Dose $\text{ab } \mathfrak{z}\text{js}$ $\text{ad } \mathfrak{z}\text{ij}$. Or \mathfrak{R} leaves of Scurvey-grass, of Brooklime, of Watercresses, the yellow of Orange and Limon peels, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{iv}$. Powder of the roots of Contrayerva, Virginian Snake root, wild Radish roots, Scorzonera candied, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{ss}$. powder of Cor. Winteranus, roots of Angelica, Aron, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{j}$. powder of Zedoary, Cubebs, Cardamoms, Anacardiums, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{ss}$. Salts of Wormwood, of Scurvey-grass, of Tartar calcinea with Niter, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{ij}$. white Sugar $\mathfrak{z}\text{xxxij}$. beat all well in a Mortar, and with Syrup of juyce of Scurvey-grass q.s. make an Electuary: Dose $\text{à } \mathfrak{z}\text{ij}$ $\text{ad } \text{iv}$. Or \mathfrak{R} leaves of Scurvey-grass and Brooklime, $\mathfrak{A}\mathfrak{.}\mathfrak{z}\text{iv}$. fine Sugar $\mathfrak{z}\text{viii}$. beat them well in a Mortar, and add to it Cortex Winteranus in powder $\mathfrak{z}\text{ss}$. Niterated Salt of Tartar $\mathfrak{z}\text{ij}$. with Canary q. s. make an Electuary. Or \mathfrak{R} powder of Aron roots

roots compound ℥jss. Cortex Winteranus ℥ss. Cubeos, Grains of Paradise, Cardamums, Rocket-seed, Troches of Capers, Zedoary, Salt of Wormwood, A. ℥ij. mix and make a Powder : Dose ℥j in a proper Vehicle. The simple Waters of leaves of Aron, or of Scurvy-grass distilled in Spring-time are most efficacious remedies taken ad ℥ij or ℥iij. twice a day, with some other Medicine : pour the water on fresh herbs bruised, and so often reiterate with new Cohobations.

The Cure of the Scurvy in a hot Constitution.

§ 9. Cathartick or purging remedies in a sulphurous-jaline or hot Constitution, which is founded in an adust Dyscrasie of the Blood. Here all Aloetick and Diagrydiatic purges are to be shunned, and such only as are more temperate, which are made out of Sena, Rhubarb and the like, and do not violent agitate the Blood and Humours, are to be chosen and administered. R Extract of Rhubarb, Catholick Extract, A. gr. v. Resine of Fallap, of Agarick, A. gr. iv. Sal Armoniack gr. iij. Oyl of Amber gut. j. mix and make five Pills. Or, R Resin of Fallap gr. viij. Cremor Tartari gr. x. Celtick Spike gr. vj. make a Powder, or form it into Pills. Or R Melanagege Pills of Quercetan ℥jss. Extract of Sena ℥ss. Resin of Fallap ℥j. gr. vj. Tartar Virriolate gr. xiiij. Volatile Salt of Amber ℥j. seeds of Cresses, of Scurvy-grass of Mustard, A. ℥ss. mix and with Antiscorbutick water, or Syrup of Scurvy-grass

make a mass of Pills : Dose ad ℥j ad ℥ss. Or R Sena ℥j. Rhubarb ℥vj. Polypady of the Oak, Monks Rhubarb dried, A. ℥ss. Epithymum ℥iij, yellow Sanders, Salt of Wormwood, A. ℥ij. Celtick Spike ℥ss. Aqua Antiscorbutica, or water of Earthworms ℔ij. cut, bruise, and digest in hot Sand for two days, strain, inspissate to the thickness of Honey, and then add Powders of Sena, of Rhubarb, A. ℥j. Cremor Tartari ℥jss. make a Mass for Pills : Dose a ℥ss ad ℥j. Or give the former Tincture before Inspissation ab ℥iij ad ℥vj. adding to each Dose Cremor Tartari ℥ss. Or R Scurvy-grass, Watercresses, Wall-Rue, roots of Radish, Polypady, A. ℥ij. black Hellebor, Fallap, A. gr. v. Sena ℥j. yellow of Orange peels ℥ij. biting Cinnamon ℥jss. Cremor Tartari ℥iij. Rhenish Wine ℔iv. cut, bruise, and put the Simples in a Bag, and infuse four days, and drink every Morning ℥viij. And here are excellent the Solutive Tincture, Tinct. Cholagogæ Grulingij, Extra. Benedictum, the Polycrest Extract of Mynsicht, and the Tartar Pills of Schroder.

§ 10. For Digestives to be given in the Intervals of Purging, we prescribe these following things. R Parsley water ℔ss. Salt of Tartar ℥ss. Sal Prunellæ ℥ij. Dose ad ℥ii either alone or in Rhenish Wine. Or R Emulsion of the four greater cold seeds ℔j. Sal Tartari, Lapis Prunellæ, A. ℥ss. dissolve and give ad ℥iv. Or R Parsley water ℔ss. Hartshorn calcined ℥ij. Mace ℥j. boyl, to ℔j. strain, and sweeten with white sugar candy ℥iij. Or R Whey clarified ℔ij. Hartshorn calcined ℥j. Sal Prunellæ ℥iij. boyl, strain

strain, and sweeten with white Sugar, or Syrup of Marsh Mal-lows. Or \mathcal{R} *Rhenish Wine* \mathfrak{lbj} . *Winter Cherries* \mathfrak{N}° . \mathfrak{xlvj} . *Sal Prunelle* \mathfrak{zss} . *Sal Tartari* \mathfrak{zj} . *Calx of Egg shells* \mathfrak{zss} . boyl strain, and sweeten with Syrup of Scurvy-grass, for four Doses. \mathcal{R} *Crabs Eys prepared* \mathfrak{zj} . *Tartar Vitriolated* \mathfrak{zss} . *Salt of self-heal* \mathfrak{zss} . *Confitto A'kermes* \mathfrak{zss} . *white Sugar* \mathfrak{zjij} . mix and make Troches. Or \mathcal{R} *Coral and Pearl prepared*, \mathfrak{A} . \mathfrak{zj} . *Sal Prunelle* \mathfrak{zjij} . *Salts of Scurvygrass, of Wormwood and self-heal*, \mathfrak{A} . \mathfrak{zss} . make a Powder for three Doses. § II. As for *Antiscorbuticks* in a hot constitution or Dyscrasy of the Blood, we must avoid the much using of the aforementioned sharp things, as *Scurvy-grass, Watercresses, Horst-Radish, Winteran Bark &c.* endued with much Volatile Salt, because they are found not only ineffectual, but even hurtful to such Constitutions: and make choise of things more temperate or rather cooling, which may les agitate the particles of the humours which of themselves are apt to grow hot. Among Simples and Official Compounds we have these. The five opening roots, Trefoil, Sorrel, sharp pointed Dock, Bloodwort, juyces of Citrons, Limons and Oranges, Wood Sorrel, Juniper-berries, *Cremor Tartari*, Dandelyon, all the Succories, Fearn root, the lesser Housleek, Tincture of the Flowers of Columbines, Milk, Whey of Goats Milk, Fumitory, Carduus, Ceterach, all the Capillary Herbs, Hyssop, German-der, Betony, Agrimony, Borrage, Bugloss, Polypody, Endive,

Oyls and Spirits of Vitriol, Salt, Sulphur, Spirit of Sal Armo-niack, Salt of Tartar, Sweet Spirits of Salt, Sulphur and Niter, Spirits of Tartar, and of Urine, all the opening Preparations of Steel, steeled Wine of *Finkius*; sharp Mineral waters, especially of Vitriol, *Syrupus de quinque Radicibus*, *Syrupus de Scopolendrio*, Syrup and Tincture of Corals, *Bahls Tincture of Coral*, *Arcanum Perlarum*, *Aqua Theriacalis*, & *Prophylactica Sylvij*, *Aqua Limacum Magistralis*, *Scordij Composita*, *Diuretica Clossæi*, *Aqua restaurativa*, *spiritus Diapente*, &c. § 12. Among singular Compounds, we have these. \mathcal{R} *leaves and roots of Dandelyon* \mathfrak{Mjss} . *Sorrel* $\mathfrak{P}.$ \mathfrak{j} . *Citron and Carduus seeds*, \mathfrak{A} \mathfrak{zj} . *Cyden* posset drink \mathfrak{lbjss} . boyl to \mathfrak{lbj} . strain, and give it to drink. Or \mathcal{R} *roots of Cherwil, of Grass, of Dandelyon, of Sorrel, of Parsley, Scorzoneria*, \mathfrak{A} . \mathfrak{zj} . *leaves of Agrimony, Hartstorgue, Cleavers, Liver-wort, Succory*, \mathfrak{A} . $\mathfrak{M}.$ \mathfrak{j} . *Liquorice, Burnt Hartsborn*, \mathfrak{A} \mathfrak{zss} . boyl in spring-water \mathfrak{lbviij} to \mathfrak{lbvj} . strain and dissolve therein *Sal Prunelle* \mathfrak{zvj} . Dose \mathfrak{zvj} Morning and Evening. Or \mathcal{R} *of the former Decoction, and infuse therein leaves of Brooklime and Watercresses*, \mathfrak{A} . $\mathfrak{M}.$ \mathfrak{jss} . close stopt for six or eight hours. Or \mathcal{R} *Whey* \mathfrak{lbij} . *roots of Dandelyon, leaves of Fumitory and Brooklime bruised*, \mathfrak{A} . $\mathfrak{M}.$ \mathfrak{ss} . infuse, strain, and add to it *juice of Pilewort* \mathfrak{lbj} . Dose \mathfrak{ziii} or \mathfrak{iv} twice or thrice a day. Or \mathcal{R} *juyces of Brooklime, Watercresses*, \mathfrak{A} . \mathfrak{lbss} . *juyces of scurvy-grass, of Oranges and Limons, and wood Sorrel*, \mathfrak{A} . \mathfrak{lbj} . purify them in a Glass close stopt: Dose

ab ʒij ad ʒvi. Or ʔ leaves of *Watercresses* M. iv. strings of *English Rhubarb* M. ij. bruile and exprels the juyce, which give in a convenient Vehicle. Or ʔ juyces of *Wood sorrel*, *Brooklime*, *Fumitory*, A. ʔij. make a syrup of them with water of *Earthworms*, as we formerly taught in § 8. of the juyce of *Scurvy-grass*. Or ʔ juyces of *Brooklime*, of *Cresses*, of *Cardamine*, of *Pilewort*, of *Wood sorrel*, A. ʔij. juyces of *Oranges* ʔiv. mix and keep them in a Glass close stoppt. Or ʔ leaves of *Brooklime*, *Garden Cresses*, *Fumitory*, *Harts-tongue*, *Liverwort*, *Bawm*, *Tops of Tamarisk*, and *Cyprus*, A. ʒss. roots of *sharp pointed Docks*, *Polypody of the Oak*, A. ʒij. yellow of *Orange peels* N°. iv. cleansed *Snails* ʔij. *Whey* made of *Cider* ʔvj. cur, bruise, mix and distil. Or ʔ leaves of *Scurvy-grass*, of *Brooklime*, *Water* and *Garden Cresses*, A. Mij. rinds of four *Oranges*: *Snails* one pint: *New Milk* or *Whey* thereof ʔvj. cut small, bruise, and distil as before. Or, ʔ *Cider*, or *Wine* of *Currans*, *Raspberries*, or *Cherries* made by fermentation as much as you please, into which put *Tops of Pine* or *Fir-tree*, *flowers of Tamarisk*: also *Savings of Hartshorn* or *Ivory*, which sweeten the Liquor, and preserves it from growing sower; for that the particles of the fluid Salt of the Cyder, (being apt to grow sower of it self) are hindred by dissolving the aforesaid Ingredients; this is grateful to the Stomach, and purifies the Blood. Or ʔ *Conserves of Brooklime*, *Cardamines*, species *Diatrion Santalon*, *Diarrhodon Abbatii*, powder

of *Ivory*, *Salts of Wormwood*, *Tamarisk*, A. ʒi. *Pearls* prepared ʒss. with syr. of *Coral* q. s. make an *Electuary*. Or ʔ *Conserves of Wood sorrel*, and of the *Hip of the Canker Rose*, A. ʒij. or *Conserves of sharp pointed Docks* and *succory roots*, A. ʒij. *Troches of Rhubarb* ʒij. *Sal Prunellæ*. species *Diamargariton frigidum* ʒjss. *Tamarisk bark* ʒi. preserved *Myrobalans* N°. ii. with Syrup of preserved *Myrobalans* make an *Electuary*. Or ʔ *Brooklime* ʒvi. *Wood Sorrel* ʒij. *White Sugar* ʒviii. *Meal of sweet Fennel seeds* ʒss. *Powder of Ivory* ʒij. *Sal Prunelle* ʒjss. with Syrup of juyce of *Brooklime* q. s. make an *Electuary*. Or ʔ roots of *Radish* ʒiii. of *Fearn* ʒj. leaves of *Scurvey-grass*, *Brooklime*, *Watercresses*, A. P. j. *Tamarinds* ʒi. *Smallage-seed* ʒjss. boyl in *Barley-water* or *Rhenish Wine*: strain, and in ʒxxiv. thereof mix *Syrupus de quinque Radicibus* ʒij. *Spirit of Vitriol* gur. xx. Or ʔ *Powder of Chamepitys* and of *Aron compound*, A. ʒjss. powder of *Ivory*, of red *Coral* prepared with juyce of *Oranges*, A. ʒij. seeds of *Citron*, and *Carduus*, roots of *Male Peony*, *Scorzonera*, *Pearl* prepared, A. ʒjss. make a fine Powder: or with Salt of *Tamarisk* ʒiii and Gelly of *Snake skins* make Pills, to be swallowed while they are soft: Dose à ʒii ad ʒjss. after the same manner you may make Multitudes of other Compositions.

The Cure of the Symptoms.

§ 13. This is the second Intention, being the removal of the conjoynd cause, which is also often removed

moved by the aforegoing Medicaments: but where the Disease is inveterate and the symptoms vehement, we must not always follow the former course directly, but deviate according to the violence of the Symptom concomitant, which sometimes requires peculiar, and as it were extraordinary Medicaments, letting the general cure to be for a season interrupted. In prosecution hereof, the first Symptom which offers it self to our Consideration is. § 14. First, Difficulty of Breathing, with straitness of the Breast, and Asthmatical fits. It is cured by Volatile Salts of Harts-horn, Blood, Soot, Urine, Mens Skuls, Tinctures of Antimony, Castor, or Sulphur, Elixir Proprietatis, Spirits of Vitriol or Sulphur, flowers of Sal Armoniack, Laudanum, dissolved in Sack gr. j or ii. Confection of Alkermes with Saffron: also Spirit of Sal Armoniack with Tincture of Saffron and Scurvy-grass is a Specifick. § 15. Secondly, Itching Tumors and Putrefaction of the Gums: R Tincture of Gum Lacca ℥ss. flowers of Columbines ʒj. spirit of Scurvy-grass ʒij. mix, and therewith wash the Mouth. If the Teeth be loose wash with a Decoction of astringents Herbs in austere Wine, adding Spirit of Vitriol and Alum, which are most effectual. § 16. Thirdly, Spots appearing in the Thighs, and other parts. R Tincture of the flowers of Columbines, Arsmart, A. ʒss. Cinnamon ʒj. spirit of sal Armoniack ʒss. mix them: Dose ʒj in Wine: Outwardly make emollient and discussive Baths of

Juniper-berries, Cresses, Scurvy-grass, Camomil, &c. § 17. Fourthly, Pains of the Thighs, Leggs, and other parts, as Neck, Hands and shin-bones. R Camomil and Elder-flowers, leaves of Watercresses or Brooklime, A.Mj. Juniper-berries M.iss. cut, grossly bruise, and boyl in Whey q. s. make a fomentation and Cataplasm: then apply this following with a cloth made hot: Take spirit of Earthworms ʒv. of Sal Armoniack ʒss. of Scurvy-grass ʒij. mix and dissolve therein Venice Soap ʒii. Camphir ʒii. Opium ʒij. Saffron ʒj. mix, digest for a Week, filter, and keep it for use. Inwardly give Pouder of Crabs Eyes and Claws, jaws of Pikes, Sp. and flowers of Sal Armoniack, Spirit of Blood, Tinctures of Antimony and Coral; Decoctions of roots and seeds of Chamepitys, Germander, Burdock; distilled waters, of Horsdung, Scurvy-grass, Brooklime, Aron, Gout Ivy, &c. these may be given twice or thrice a day with Antiscorbuticks. § 18. Fifthly, Pains of the Belly. Scorbutick pains of the Belly are said to be worse than all Chollick pains, and they often last for many days, weeks or months. Against these evils, Clysters, Fomentations, Liniments and Cataplasms are administered. In this place the prescript of Riverius (wherein he mixes purging Pills with Laudanum) may take place. Pouders of shell fish, which absorb or fix the Acetosus Salt, conduce very much to the profligating or driving away the Morbifick cause. Take Pouders of Crabs Eyes,

Eyes, of Egg-shells, A. ʒjss. of Pearls ʒj. mix, divide it into twelve parts and give one part every sixth hour, with some Antiscorbutick water. In this very Case, the use of Barnet or Epsom purging waters are highly commended, and afford great relief. Or Take spirit of Sal Armoniack ʒj. spirit of Juniper-berries ʒij. Quintessence or Powers of Oranges, A. ʒjss. mix them : Dose gut. xxx in Canary: Or Take Powers of Juniper-berries ʒj. Ens Veneris ʒj. mix and give gut. xxx in Canary: and withal you may exhibit Enema Anodynum Mynsichti.

§ 19. Sixthly, *Pains about the Ankles, Feet and Soals thereof.* They are cured as the former, outwardly make a Medicine of Elder-flowers Mij. boyled in Wine, adding Soap ʒij. and apply it upon a cloth to the part pained.

§ 20. Seventhly, *Pains of the Sides, Hypochondries, Nephritical, and of the Loyns.* These are to be cured by the former Directions; Or if the Stomach seems to be full, give a gentle Vomit of Wine of Squils or Sal Vitrioli: but if the peccant Humor disturbs the Belly, then give an Extract or Infusion of *Rhubarb* or *Sena*, with Salt or Cream of Tartar. But if the matter sticks fast within the Membranes or Nervous foldings, give Diaphoreticks and Alcalies, which may restrain the effervescencies of the Salts. *Elixir Proprietatis*, Flowers of Sal Armoniack and Spirit of Soor, may be taken by turns with Waters compound of *Radishes*, of *Earthworms*, or of *Snails*: outwardly anoint with

this, *R Oyl of Earthworms, of Camomil, Scurvy-Grass, A. ʒij. mix for a Liniment.*

§ 21. Eighthly, *Pains of the Head.* The quantities of hot things are to be diminished, but Brooklime is to be given in a greater Dose; the Stomach is to be strengthened and fortified; the Hypochondries are to be anointed with things opening; and to the Temples this Liniment is to be applied; *R Oyls of Henbane and Poppy-seeds by expression, A. ʒj. Oyl of Camomil ʒj. Oyl of Dill gut. vi. mix them.* Inwardly give Cephalicks, mixt with Antiscorbuticks, as Powers of Oranges and Limons with Spirit of Scurvygrass.

§ 22. Ninthly, *Arthritick Pains or wandring scorbutick Gout.* In this Symptom it is wonderfully to be observed, that if a live Worm be laid upon the place that is fullest of pain, it will skip, twine it self about, wind it self round, slide along and dye. In the cure hereof, the Magisterial waters of Earthworms and of Snails are excellent, as also Spirits and Salt of Harts-horn and of Blood, flowers of Sal Armoniack; powders of Crabs-claws and Eyes, of Coral, Pearls and shells; roots of Birthwort, leaves of Ground pine, Germander, &c. exhibited with Antiscorbuticks. *Petræus* prescribes this, *R Earthworms N° ix. Wine 2 spoonfulls, bruise them in a Mortar; mix therewith Wine half a pint, strain it out, and give thereof three spoonfulls morning, noon and night, for several days together.* Another of the same *Petræus*, *R Rhenish wine ʒij. Honey ʒij. leaves of Sa-*

win ʒj. boyl well together and strain. Dose ʒij. thrice a day. *Horstius* has this, R̄ *Betony, Rue, Sage, Savin, Roots of Devils-bit, A. ʒj. Earth-worms* N^o. v. Elder flower water ʒʒs. bruise all well together, press out the Juyce, and give it to provoke sweat. The Essence of Pine tops is also commended. Outwardly anoint with Oyls of Earthworms; of Frogs by distillation, and of Toads. *Balsamum Arthriticum*, and other Anodyns. § 23. Tenthly, *A Scorbutick Paralysis or Palsy*, You must have recourse to the cure of that Disease, in its proper place, using such thing as we have there advised, but always with this caution, that you mix therewith Antiscorbuticks, chiefly Brooklime and Scurvy-grass; and also you may give the same things which we advised in the former Paragraph: foment the part with water or Wine, in which leaves of Sage, Rosemary, Betony, with Elder and Melilot Flowers have been boyled; then annoint with this, R̄ *Common Oyls of Earthworms ʒj. of Scurvygrass and Hypericon, A. ʒʒs. distilled Oyls of Rue, Rosemary and Sage, A. ʒj. mix them.* § 24. Eleventhly, *A Convulsion and contraction, which commonly invades the sick so, that by-standers think them bewitched.* It is to be cured as we have taught in its place, but by mixing those things with Antiscorbuticks; Inwardly, give *Spirit of Sal Armoniac, gut. xvj. mix with Powers of Orange ʒj. mixt with Canary;* or with the like quantities of Sage or Rosemary. Outwardly, you

must use Emollients and Discussives. The Oyntment of *Valeriana*, or that ad *spasmus Nervorum*, mixt with Oyls of flowers of *Hypericon*, and Scurvy-grass, are much commended to anoint with; so also the *Balsamum spasmaticum Mynsichti.* § 25. Twelfthly, *Drowsiness, and Carus or deep sleep.* See the Cure in its proper place, with which things, always be sure to mix Antiscorbuticks, or else you will certainly labor in vain; you may exhibit juyce of Water Cresses in Rhenish Wine, after a due opening and cleansing of the Body: Or you may give this, R̄ *cardus water ʒij. Treacle water ʒj. Aqua Antiparalitica ʒʒs. spirit of Sal Armoniac gut xvj. mix for a draught, to be given in the Evening, and to sweat after it: annoint the Nape of the Neck and Temples with Chimical Oyls of Rosemary, Oranges and Limons.* § 26. Thirteenthly, *Palpitation of the Heart and Swooning.* Give *Confectio Alkermes vulgar,* or of Our Prescription, or *Confectio de Hyacintho*, or pouders of Coral and Pearl, mixt with a third part of Saffron or Cochinele; or an equal part of pouders or Extracts of Virginian Snake root or Contra yerva, which exhibit with Magistral Water of Earthworms or some other Antiscorbutick seven or eight times a day. § 27. Fourteenthly, *Vomiting, loathing, or sickness at Stomach.* If it is (as for the most part) in a cold or flegmatick Constitution or habit of Body, and there is in the stomach also a fullness; you must first of all cleanse by giving *Sal Vitrioli*

Vitrioli à gr. xlv. ad ʒj. dividing it into three parts, and exhibiting each part in a little Chicken Broth, which let be done immediately after the preceeding Vomit, till the three parts are taken, this Vomit repeat for four or five times, every third or fourth day: the stomach being cleansed, you must exhibit to corroborate it *Elixir Proprietatis* ad gut. xxx: Q. Essence or Powers of Juniper-berries, or cloves in Canary; Or the mixture of the Spirit of Angelica and Oyl of Cinnamon in Spirit of Scurvy grass, or which is the best of all the Qu. or Powers of Wormwood ʒls. at a time in a glass of Canary and Rhenish wine, of each equal parts, to be taken three, four or five times, or oftner every day. § 28. Fifteenthly, *Too much or often spitting.* 'Tis prevented by avoiding hot and sharp things and Medicines which diffuse the matter, and in part remedied by things lenifying and cooling, which quiet and still the humors, among which are milky things, juyces and waters of Purslane, Houfleeck, Lettice, to which add Narcoticks, as Poppy water, Syrup of Poppies, Oyls of Poppy and Henbane seed, Laudanum, &c. § 29. Sixteenthly, *A Flux of the Belly, whether Diurnal or Nocturnal.* This in Scorbutick persons ought by no means to be stopt by astringents. Purging waters, impregnated with Iron or Vitriol, are accounted the best Medicines for this Distemper: and next to these are the Artificial Spaws, and Chalybeat pre-

parations. *Crocus martis* is by some preferred before all others: Syrup of Roses Solutive and with Succory, are good, after which you may give the powder or Infusion of Rhubarb, with Spices to be repeated every three or four days: In the intermediate days, give Wormwood Wine in Decoction of Succory, observing a drying diet; Or Decoction of Guajacum prepared with Antiscorbuticks, and mixt with Powers of Wormwood and Spirit of Mastich: If the Flux is Dysenterical, R. Rhubarb, in powder ʒj. red Sanders ʒij. Cinnamon ʒj. Crocus Martis ʒiij. Lucatella's Balsam enough to make it up into Pills: Dose ʒj. every night. § 30. Seventeenthly, *Scorbutick Fever, with Nightly sweats.* In this case, you must order a slender Diet; often exhibit Decoctions and distilled waters which purify the Blood, mixt with Antiscorbuticks; as, R. Spring water lbiiij. Raisins of the Sun, leaves of Harts-tongue, Liverwort, Succory, A. M. j. roots of Chervil, Dandelyon, A. ʒss. Eryngo roots preserved ʒj. shavings of Ivory and Harts-horn, A. ʒiij. One Apple cut: boyl to the Consumption of a third; strain, and infuse therein for three hours: Brooklime bruised Mij. Sal Prunelle ʒjss. fixed Niter ʒj. strain and give ʒiij. or vj. thrice a day. Or R. Brooklime lbiiij. Sorrel, Dandelyon, A. M. ij. Snails cleaned lbiss. rinds of two Oranges, cut, bruise and put to them Whey, & juyce of Apples lbvj. then distill. Dose ʒiij. thrice a day, with gut. xvj. of Spirit of Sal Armoniacks

§ 31. Eighteenthly, *Dropsy, Cachexy, and such like.* Make the Belly solable by frequent Clysters, and, if strength will permit, take this following powder often, a due space of time being limitted for the Intervals, *R. Rosin of Fallap, à gr. vj. ad xij. of Cloves ʒss. Mercurius Dulcis ʒj.* mix and make a powder, which give in the pulp of an Apple, or stewed Prune: afterwards take Diureticks, then Diaphoreticks, which with the said Cathartick exhibit alternately. Here also Spirit of Sal Armoniack *à gut x. ad xvj.* prevails; Or Tincture of Salt of Tartar, impregnated with an infusion of Millepedes, and taken *à ʒj. ad ʒij.* twice a day in a proper Vehicle. Or *R. Millepedes prepared ʒiii. salt of Tartar ʒij. of Nutmegs ʒj. make a powder,* Dose ʒss. twice a day. Or *R. Bees dryed and powdered ʒij. Aniseeds ʒi. Oyl of Juniper ʒj. with Turpentine q. s.* make Pills; Dose ʒss. twice a day. Or *R. Scurvygrass, Water-Cresses, Pepperwort, biting Arsmart, A. Mij. Roots of Aron, Bryony, Orrice, A. ʒiiij. middle Bark of Elder Mij. Cortex Winteranus ʒij. yellow of 4 Oranges and 3 Limons: Juniper-berries ʒiiij. Rhenish wine ʒiiij. Wine of juyce of Elder berries ʒij.* cut, bruise, digest 24 hours, then Distil, and mix the first and last waters together, Dose ʒiii. or iiij. twice a day. § 32. Nineteenthly, *An Erysipelas or Antonian Fire.* It is very dangerous in the Scurvy, and therefore ought to be carefully dealt with, least it degenerates into a Malign Ulcer: besides Externals,

(ordered in the cure of this Fire) you must give inwardly Sudorificks, as the Rob of Elder, Water and Spirit of Flowers of Elder, Carduus water, Bezoar Mineral, Spirits of Sal Armoniack, and of Scurvy-grats. § 33. Twentiethly, *Scorbutick Ulcers.* Inwardly you must exhibit Antiscorbuticks with such things as allay the sharpness of humors; as Pearl, Coral, Crabs-Eyes and Claws prepared, powders of Harts-Horn, Ivory, &c. Outwardly apply *Diapompholigs* with juyce of Brooklime: *Sennertus lib. 3. par. 5. sect. 2. cap. 7.* saith, That a great Ulcer of the Thigh, spreading almost over the whole Legg, and deep to the Bone, was cured by applying Brooklime alone boyled in Ale twice a day. If it degenerates into Gangreen, you may use Decoction of Quicklime with Antiscorbuticks: Or Spirit of Flegm of Vitriol: or Mercury precipitate. § 34. Twenty first, *Pushes and hard Nodes in any part of the Body.* If they break out suddenly, and by and by vanish, they presage a Palsy. You may apply a Cataplasim made of Comfry-roots, of Bryony-roots, leaves of Wormwood and crums of White-bread boyled in Milk. Or this, *Take Emplastrum Diaphoretick of Mynsicht ʒjss. Comfry roots the greater and less, juyce of Brooklime inspissated, A. ʒi. soften them with distilled Oyl of Dill,* mix and make an Emplaster. § 35. Twenty second, *An Atrophie, Consumption, or wasting of the flesh.* The Learned Dr. *Willis* saith, That there are three kind of

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Causes

Causes hanging by a certain Series, from one or more of which, the Scorbutick Atrophy (without Consumption of the Lungs) is wont to be produced, viz.

1. Either the Chyle is perverted by the default of the first passages, by which means it does not carry sufficient or laudable Provision to the Blood.
2. Or, being brought to it, yet by the fault of the Blood, it is not rightly changed into Blood or Nutricious juyce.
3. Or the Nutricious juyce being prepared in the Bloody mass, by reason of the fault of the Nervous liquor, it is not rightly assimilated in the solid parts.

In the first case gentle Catharticks, Digestives and strengthners are to be administered: and if a Scirrhus Tumor be feared in the Ventricle, Mesentery, or Circumjacent parts, you must give things opening, and dissolving, as Pills of *Ammoniacum* &c. Spaw or purging waters, as those of *Barnet*, *Epsom* &c. and outwardly *Emplastrum de Galbano Crocatum Mynsichti*. In the other Cases, wherein the *Marasmus* or wasting of the flesh arises from the fault of the Blood, &c. nothing is said to be more excellent than Goats-Milk, given with some Antiscorbutick Spirit dropt into it; also Asses or Cows Milk diluted with water distilled from Antiscorbuticks: Milk-Meats and Broths. Broth of Snails in Milk. distilled Water from Milk or Whey, with Snails and temperate Antiscorbutick herbs, are all much commended. Here no hot things agitating the Blood, Spirits and humors are to

be admitted, but the whole matter of the Medicine ought to be temperate and sweetning the Blood; as, *Take leaves of Brooklime, Cardamines, Harts-tongue, Maiden-hair, Liverwort, Betony, Agrimony, A.Mij. snails cleansed* (i.e. *Heart cut to peices*) *being all scalded and cut, bruise them together, to which put new Milk, or Fumitory water lbvj. distil, and give ℥vj. three times a day or oftener.*

The fortifying the Vital and Animal spirits, and strengthening the weakened parts.

§ 36. This is the third Indication of the Cure of this Disease, which shews by what means the strength of the sick, being too apt to languish, may be sustained: Or, being lost, or cast down, may be restored. That this may be rightly done, Cordials, Opiats, and an Analeptick Diet, Antiscorbutick are to be prescribed. § 37. Cordials, thoroughly agitate the Blood stagnating in the Heart, resuscitate its wasted flame, revive the oppressed spirits, and universally strengthen the whole Man: Of these kind of remedies many are purely Antiscorbuticks, as *Aqua Raphani Composita, Aqua Spiritus Lumbricorum & Limacum Magistralis, Aqua Theriacalis & Bryonia Composita*: Spirits of Harts-horn and Soot, Pouder of Crabs Eyes and Claws, Coral and Pearl prepared, &c. others are purely Cordials, as *Elixir Vitæ majus Quercetani*: the second water or spirit of which may

may be given to a spoonful sweetned : *Aqua Bezoartica*, *Angelica*, *Mirabilis*, *Celestis*, *Imperialis*, *Gilberti*, *Cinnamomus*, each of these may be given alone, or Compounded with *Confectio Alkermes* Vulgar or of Our prescription, *Confectio de Hyacintho*, Alcohol of Pearl, red Coral, Syrups of Coral, of Citrons, of Cinnamon, or of Clovegilliflowers, Tinctures of Saffron, or Cochenele. As Take spirit of *Angelica* the greater composition §iv. Oyl of Cinnamon ʒss. mix and give half a spoonful in choise Canary. Or Take Powers of Cloves ʒss. *Aqua Mirabilis* ʒii. Syrup of Cinnamon ʒi. mix them. Or Take *Confectio Alkermes* ʒii. powder of Pearl ʒi. with Syrup of Coral make an Eleſtuary, &c.

§ 38. Opiates or Narcoticks rightly given, and in their right time, transcend all other Medicines, as we fully know by experience; and that there are no better remedies, in vehement pains, exorbitant Watchings, Asthmatick Paroxysms, Vomiting, Fluxes, and Convulsive distempers, than the exhibition of some safe Narcotick. For this purpose are commended. Syrups of Lettice and Wild Poppies, Laudanum, Nephenthe, Philonium, Diacodium, Extract of Opium, Liquor Vitæ Anodynus, *Confectio Anodyna*, and Tincture of Opium made with juyce of Limons or Quinces given à gut. x. to xx or xxx. in good Sack.

§ 39. As to Diet these things are to be observed, without which, whatever we have hitherto said is almost in Vain. As to the place or Air, let it be moderately hot and dry,

thin, and pure. As for Food, let it be light, easy of Digestion, of good juyce, inciding, attenuating, absterfiv and aperitive, where note, the eating of Wild Pigeons, and Hedge Sparrows are commended: so also flesh of Vipers, and Viper-Broth. But Unripe Fruits, Pulse, Milk Meats, Sweet Meats, and Sugar or things Sugared, are to be avoided. The most learned and famous Physicians have attributed the cause of the increase of the Scurvy, principally to the eating of Sugar and immoderate use of sweet things. For sugar is a concreet made up of a sharp and corrosive salt, mixed with an Inflammable sulphur, a demonstration of which the spagyrick Art affords. For being distilled without Fermentation by it self, it yields a very sharp and corroding Liquor, not much inferiour to *Aqua Fortis* from whence it comes to pass, that Sugar being plentifully used in almost all our Food makes the Blood and Humors salt and sharp, and from thence scorbutick. But being mixt with water and fermented, and then distilled, it yields a thin, pure Aethereal Liquor, and inflammable, like to the strongest and best *Aqua Vitæ*: Now whereas sugar before Fermentation may in all probability breed and increase the Scurvy; the same thing after Fermentation (being diluted in Water) becomes Antiscorbutical, and so much the more if it be mixt with, or Antiscorbuticks be digested or infused in it. As for Drink, it may be a mild or clear Beer, or Cyder, or Perry, or sugared water fermented (ʒi of Sugar to a Gallon of Water mixed with Salt

of Tartar ζ ss, and wrought up with Ale Yest, or Leven :) all which things may be digested and altered with Antiscorbuticks, but without any ingrateful taste, not being thick, nor sweet, nor salt, nor sour. *Mornings draughts are to be avoided*, it is an evil custom, and strangely begets the Scurvy ; for thereby the Sanguiferous Vessels are too much filled with fresh Chyle, and thereby both Crudities and Morbifick Fæculencies are sent and insinuated into the Blood, whereby the office of Sanguification is greatly weakened: *It is infinitely the better to remain fasting till Dinner*, for that kind of abstinency is a very great Antiscorbutick remedy, and performs alone, as much as all the things which we have yet enumerated in order to the Cure of this Disease. King Solomon that wise Physician gave the same advise to Princes who are to be ensamples to their People, and pronounced a Woe to that Nation whose Princes eat in the Morning shewing that we ought to Eat in due season for Strength and not for Drunkenness, Eccles. 10. 16, 17. it is good Counsel of great Antiquity, and an Efficacious Antidote against the Scurvy. *Exercise and Labour ought to be used*, as being very profitable to scorbutick persons, and many by this only remedy have recovered. For by an Idle and Sedentary Life the Blood and Nervous Liquor, like standing waters putrefy and corrupt ; whereas by much and constant Motion of the Body, the Blood, Spirits and Humours, or

juices of the Body, are made strong, clear, and active. § 40. *Observations.* A young Man (saith Barbet) more than thirty years of Age, so Scorbutick, that he neither could goe about his Chamber, nor stand on his Feet, was cured in 7 days with this : *Take Rad. sh root ζ iii. Whey lbij. boyl to the consumption of lbj. strain, and give a quart every day.* A rich Merchant having many blew spots on his Arms and Leggs, which spots were very high, year near to pustles, was perfectly cured in three Weeks with Spirit of Sal Armoniack, observing withal an exact Diet, The same Barbet saith, That the sweet Spirit of Sal Armoniack, and Scurvy-grass, excels all other Medicines. A Woman of thirty five years of Age, having an Inverate Scurvy which spots and pustles, and a Scorbutick Dropsy, was in a Months time cured with these two Medicines. *Take Sena ζ ij. powder of Jallap ζ i. S.V. lbij. infuse and make a Blood red Tincture : Dose three or four spoonfuls in the Morning fasting every fourth day : in the intermedate days she took this : Take Parsley water or water of Earthworms lbij. Oyl of Tartar, Volatile Sal Armoniack, A. ζ ss. Spirit of the same ζ ij. mix them, Dose (Sweetened) four spoonfuls Morning and Night : With these two only remedies, we have cured many others in like manner affected.*

IV. *ῥδρωψ, Hydrops, The Dropsy.*

§ I. *We shall handle this Cure first in a general manner, afterwards*

wards we shall make some particular remarks. The Indications of Cure are three fold, First the evacuation of the matter : Secondly, the taking away the Cause producing that matter : Thirdly, The strengthening the weakned Viscera, chiefly the Liver. § 2. The first Intention is performed by Emetics, Catharticks, Clysters, Diureticks, Sudorificks and Topicks : Or by Tapping. § 3. Emetick Hydragogues are chiefly these, *Cambogia*, *Ejula*, *Spurge*, and their several Preparations; the *Hercules Bovij*, and *Pil. Lunares*: you may give the Solution of *Cambogia* in a Tinct. of Salt of Tartar à gut. xvi ad xx or xxx Drops. The lesser spurge or *Tubymalus* is now only in use, of which there are prepared the powder of the Bark of the Roots, and the Extract. The *Hercules Bovij* works strongly and powerfully, causing the serous humors (violently strained into the Cavities of the Bowels) to be ejected. The *Pilula Lunares* work the same thing in the same manner, viz. by wrinkling the Fibers of the Bowels, whereby they force the serous humors to be strongly strained into their passages, and so evacuated. There is also commended the Extract of Black Hellebor, *Aquila Celestis*, *Mercurius Vitæ*; the last of which, may be given à gr. ii ad iv. and increased ad gr. vi. if the Body be strong. § 4. Among compound Emetics we have these. Take *Cambogia* gr. xij *Calamelanos* ℥ss. conserve of Wood-sorel ℥iij, mix for 2 Doses. Or Take *Cambogia* gr. xii. Oyl of Cinnamon gut. i. Syrup of Buckthorn q. s. make a Bolus :

Increase the Dose of the Gum dayly (for six days) till it comes to gr. xx. Or Take Tincture of *Cambogia*, aforementioned ℥j. Water of Earth-worms ℥j. Syrup of Rhubarb ℥ss. mix them. Or Take Extract of spurge or *Ejula* ℥ss. Tincture of Salt of Tartar ℥vi. digest in a Sandheat, till a Tincture is extracted : Dose à gut. xx ad xxx. in a fit Vehicle. Or, Take powder of spurge à gr. vii ad x. Cinnamon ℥ss. salt of Tartar gr. viij. with a fit Conserve or Syrup, make a Bolus or Pills. § 5. Catharticks, or such as are meerly and chiefly purging are either mild, as *Soldanella*, *Orrice-root*, *Peach-flowers*, *Elder* and *Dwarf-Elder* : Or strong as *Gratiola* or *hedg Hissop*, *Bryony*, *Jallap*, and *Elaterium*. The Water and Spirit of Elder-berries are much commended in this Cure : but the Seeds or grains of Elder or *Ebulus* are better, being dried, poudred and taken ad ℥i. *Soldanella* and *Gratiola*, are seldom given alone, but mixt with other Hydragogues : English *Orrice* or blew Flower-de-luce, is a good Medicine, and so much the more to be esteemed, because easy to be had for Poor people ; the juyce is given à ℥vi ad ℥ss or ℥ii. in a fit Vehicle. *Jallap* is an excellent thing, but its Resin is more safe, excellent, and easy : *Elaterium* is the most powerful Hydragogue; for it happily working, the Disease is oftentimes Cured : Dose à gr. iij ad xv. either by it self, corrected with Cloves and Cinnamon, or given with other Hydragogues ; Or you may give its Tincture and

Essence extracted with S. V. or Tincture of Salt of Tartar. § 6. Among Official compound Hydragogues we have these: Elixir Purgans Panchymagogum: Tinct. Cathartica Clossæi, Cathartica Myrsij, Catholica Grulingij, Phlegmagoga & Hydragoga Grulingij, Extr. Diacarthamum Andernaci, Diacitri Reusneri, Holagogum Andernaci, Panchymagogum Agustanum, Hydragogum Magistrale minus & majus Zwelferi, Catholicum Sennertij, & Weckardi, Panchymagogon Mynsichtij, Syrupus de Cornu Cervi, Pulvis Catharticus universalis & specialis, & purgans Scheferi. Benedicta Laxativa, Confectio Hamech, Electuarium ex fructibus Ebulli, Catharticum ex Esula, Pilulæ de Agarico, ex duobus, de gutta Gamba, Mechoacanæ, de Esula Fernelij, Phlegmagoga Quercetani, de Sagapeno Quercetani, Catholica Mynsichtij, Arthritica Scheferi, Gummossæ Clossæi, Hydragoga Mynsichtij, Peruviana Mynsichtij, Pilulæ Holagogæ, Infusum Hydragogum Barbetti (*which is an excellent thing*.) Tinctura Cathartica Magistralis, Pulvis admirabilis: Diajallapæ, Diagamba, & Diaturbith nost. Electuarium Chologogum & Phlegmagogum Sylvij, Pilulæ Euphorbij nostræ, Hydropicæ Bontij, (*rare Medicine*.) &c. § 7. Among singular Compounds we have these. A Powder from Riverius: R. Sena, Turbith, Hermodactis, Ebulus seeds, Jallap, Mechoacan, A. ʒj. Cambogia ʒss. Diarrhodon Abbatij, Fennel seeds, A. ʒj. Cremor Tartari ʒij. sugar Candy ʒij. mix

and make a Powder: Dose ʒij or iʒs infused all Night in White Wine ʒiv. A Tincture from Dr. Willis: R. Ebulus, English Orrice, A. ʒjss. Soldanella, Hedg Hysop, A. M. j. Asarum, Asis Cucumer roots, A. ʒij. roots of lesser Galangal ʒvj. Jallap ʒss. Elaterium ʒij. Cubebs ʒij. cut, bruise, and put upon them small S. V. tartarised ʒliii. digest close stoppt in Sand for forty eight hours, strain and depurate by settling: Dose two or three spoonfuls in Sack. Or R. Elaterium, Soldanella, Ginger, A. ʒj. Galangal, Cloves, Ginnanomon, A. ʒss. Salt of Tartar gr. xv. make a Powder for two Doses. The Cathartick of Barbet: R. roots of Orrice ʒjss. Parsly ʒss. Sena ʒj. Rhubarb ʒss. Agarick ʒij. Cinnamon ʒij. Cloves ʒj. Agrimony M. j. put them into a little bag and infuse them in Rhenish Wine ʒliv. Dose every Morning ʒvj. sweetned if you so please. The Hydragogue Syrup of Riverius: R. juyces of Damask Roses ʒij. juyces of Danewort, of Flower-de-luce, of leaves of Succory and Agrimony, A. ʒss. seeds of Danewort, Rhubarb. Mechoacan, A. ʒij. spicknard, yellow sanders, A. ʒij. Crystals of Tartar ʒij. infuse warm a whole night boyl a little. strain. and with its equal waight of white Sugar make a Syrup, adding to it Salt of Wormwood ʒss. Dose ʒss in Broth twice a Week. The Hydropick Pills of Deckers: R. Extract of Elaterium gr. viij. Magistery of Cambogia, Resin of Jallap, A. gr. v. Fæcula of Orrice-root gr. vj. distilled Oyl of Mace gut. ij. mix and make seven Pills. Dr. Willis his Pills: Take R bu-

Rhubarb ℥j. Tartar Vitriolated ℥ss. Elaterium gr.v. spicknard gr. iij. with syrup of Buckthorn make four Pills. Or ℞ Pulve Aloe-phanginas ℥ss. Elaterium ℥ss. Oyl of Cloves gut. iij. make four Pills. Riverius his Hydropick Wine: Take roots of Asarum, Mechoacan, A. ℥ij. Flower-de-luce, Bark of the roots of Ebulus and Elder, Scna, A. ℥j. Elecampane roots ℥ss. Soldanella ℥ij. Troches of Rhubarb and Agrimony, A. ℥j. Scammony Div. Maec, Cinnamon, A. ℥ss. dry Wormwood, Epithymum, A. P. j. White Wine ℔ijss. infuse in B.M. three days close stopt: Dose ℥iij mane, thrice a Week. Or Take juce of Flower-de-luce newly drawn with White Wine ℥iij. Manna Calabrina ℥jss. mix for a Potion. It is much commended and Mis-saria gave it as aforesaid. The Hydropick Powder of Deckers: Take Mechoacan ℥ss. Jallap ℥j. Tartar Vitriolate, Salt of Elder, A. gr. viij. Oyls of Cloves and Juniper, A. gut. ij. mix and make a Powder. Or, Take Rob of Elder-berries ℥j. Extract of Elaterium, Magistery of Cambogia, A. gr. viij. Oyl of Cinnamon gut. ij. mix and make a Bolus. Dr. Willis his Electuary: Take Resin of Jallap, Extract of Rhubarb, A. ℥ij. Extract of spurge ℥jss. Tartar Vitriolate, lesser Galingal, A. ℥i. Conserve of flowers of English Orrice ℥iv. Syrup of Peach-flowers, q. s. make an Electuary: Dose à ℥ss ad ℥jss or ℥ij. Rhubarb is mightily commended, and Stocherus saith, That he has cured many with the use of Rhubarb every third or fourth day, which is also confirmed by Scoltzius in his Epistles: and the Troches of

Rhubarb are esteemed by all Authors: some have been cured alone with them by taking ad ℥ij twice a Week. But all these things hitherto enumerated perform much more, if you add to them Mercurius dulcis, which works securely and yet gently. But this is to be observed in giving all sorts of Purges in a Dropsy, especially if they be strong, that they be not given often, least they weaken the Body, and so cause more water to be bred; for Catharticks do not always cure, but oftentimes exasperate the Disease, and if they be long continued, render it incurable, whence it appears, that it is necessary for us to have recourse to some other remedies. Galen *ἡγὰρ τῶνδ' lib. 2.* Nor do they succeed when the Water fluctuates within the Cavity of the Abdomen: Or come from a Tympanitick extension: Or from an Inflammation of the Membranes. § 8. The next remedies which we have recourse to are Clysters which divert the water, and make an excellent kind of Derivation. You may exhibit Enema Emolliens Schroderi, Enema Hydragogum, or Carminativum Mynsichti. Or this of Valeriola, Take sour Leven ℥ss. Salt P. j. boyl them in water ℔j. strain, and add Urine of a Child ℥iv. Oyl of Rue ℥iii. Honey ℥j. make a Clyster. Or this, Take White Wine ℔j. pulp of Coloquintrida ℥i. Bran M. i. boyl and strain for a Clyster. Or this of Deckers: ℞ Hedge Hyssop; Bind-Weed, Broom and Elder-flowers, A. M. i. Orrice and Bryony roots, A. ℥vi. inward Bark of El-

der, and of the Alder-tree, A. P. ii. Laurel-berries \mathfrak{z} iii. Cumin-seeds and Caraways, A. \mathfrak{z} ii. Whey \mathfrak{lb} i. boyl and strain : in which dissolve *Hiera picra*, *Diacolocynth*, Electuary of Bay-berries, A. \mathfrak{z} ls. the yolk of one Egg : mix and make a Clyster. Or this of *Riverius* : Take emollient Decoction \mathfrak{lb} j. Infusion of *Crocus Metallorum* \mathfrak{z} iv. Wine of squils \mathfrak{z} ij. *Diaphœnicon* \mathfrak{z} j. mix them. Or this : Take *Colocynthis* \mathfrak{z} i. White Wine \mathfrak{z} iii. infuse for a Night : strain and add to it fat Tripe Broth \mathfrak{lb} i. Oyl \mathfrak{z} ii. Salt-peter melted \mathfrak{z} i. Vinegar \mathfrak{z} ls. mix them, for other kinds of Derivations or Revulsions, as Issues, Blisters, Scarifications, &c. It is good to abstain from them (although they have done some people much good) by reason of the weakness of the heat in a Dropsy, which is easily extinguished, they often cause Gangreens or Mortifications. *Sq. Diureticks* now come to be considered, of which all of every kind are not convenient in a Dropsy, nor are they indifferently to be admitted especially in an *Ascites* : For in this kind of Dropsy Lixivial Salts, and acid Salts, as the Deliquiums of Salt of Tartar, Broom, &c. Spirits of Salt, Vitriol, or Sulphur, &c. have often done more hurt than good ; whereas Herbs abounding with a Volatile Salt have much helped, as juyces of Plantane, Brooklime, Watercresses, Scurvy-grass, *Mil-lepedes*, *Sal Brunelle*, &c. many Examples of which you may have in Our *Dron*, lib. i. where Diureticks whose Basis is Volatile and nitrous Salts are described, Spirits and Volatile Salts of

Urine, of Sal Armoniack, of Hartshorn, and of Bean-stalks are chiefly commended ; as also the Ashes of a Toad. *Avicen* in the Cure of an *Ascites*, saith, That a woman which had a great Dropsy was cured by eating a great number of Pomgranates : *Varignana* saith, That one who had a Dropsy from an hot Cause was cured by taking, every day, juyce of Plantane boyled to the Consumption of the half. And *John English*, affirms often to have cured an *Ascites* from an hot Cause with this : Take juyces of Plantane and Liverwort, with which fill an earthen pot to the top : stop it close, put it into a hot Oven after the Bread is drawn, and by the sides of the Pot make a little fire to continue the heat of the Oven, being boyled, strain it, sweeten it with Sugar, and give it ad \mathfrak{z} ij. Morning and Evening. Or, Take juyce of Plantane \mathfrak{lb} i. juyces of Liverwort and Brooklime, Radish or Earthworm water Compound, A. \mathfrak{lb} ss. mix them : Dose \mathfrak{z} iii. three times a day. Or, Take Mustard seed \mathfrak{lb} i. bruise it, and put upon it *Rhenish Wine* \mathfrak{lb} ij. digest twenty four hours, and drink the clear Wine, it is an admirable thing. Syrup made of the juyce of *Parietary* is almost miraculous, giving two spoonfuls thereof Morning and Night : My self was cured of an *Ascites*, with this alone Medicine : and not much inferiour to it is Our *Syrupus succorum* : so the Pouder of Hog-fennel roots taken \mathfrak{z} j. at a time does wonders, or juyce of Chervil given ad \mathfrak{z} ij. every Morning in Wine for many days. But in an

Anasarca, it is to be observed that *Lixivial* and *fixed Sales* do far excel other Diureticks : and therefore after a little purging, it is common to take a small *Lixivium* of Wormwood or Broom Ashes in White Wine, and to continue the use of it for some days : this Medicine moves potently the Urine, and sometimes in such abundance, that the sick have recovered their healths in a short time, as it were to a Miracle : but this is to be observed, that if some oleaginous Body, as Oyl of Sweet Almonds, &c. be alternately given with it, that it is more safely and securely Cures. *Reverius* commends Medicines of Steel, Tartar, and Vitriol, because they strongly open and provoke Urine without any great heat : as also tart Mineral waters, because they powerfully open the Bowels, provoke Urine, and correct the distemper of the *Viscera*. For an Ordinary drink in an *Ascites*, you may give a Decoction of Succory roots and *Calcatripa*, or White Chamelion, which is not unpleasant ; but in an *Anasarca*, a Decoction of Guajacum, Sarsa, and China. Or this, R Broom Ashes ℥ij. Sassafras ℥iii. Juniper-berries, Carrot-seed, A. ℥i℥. lesser Galingal ℥i. put them in a bag in four Gallons of Ale. Or R Ashes of Wormwood, Broom, or Vine Twigs, calcined to whiteness, ℥iv. White or Rhenish Wine ℥ij. digest four hours and strain it : Dose ℥vi or ℥viii. twice a day. Or Take nitrated Tirtar, (after melted in a crucible to blueness,) ℥iii. small Spirit of Wine ℥i℥. Water of snails

and Earthworms, A. ℥iv. digest in a Sand heat for two days : Dose of the clear Liquor ℥ij or iij. in a Decoction of Kneeholm and Burdock-roots. *Pulvis Cachecticus* mixed with Sal of Tartar is much commended : and Goose-dung drank in Decoction of Winter-Cherries, sharpened with Oyl of Vitriol, is of good use, so also Spirit of Salt in Pomgranate Wine. To these add *Mynsicht* his happy and Diuretick Lye, his *Antihydropical water*, formula of Aron, Salt of Wormwood, *Mynsicht* his coagulated Salt ; Salts of Broom, of Beans, of Elder and of Doves-dung ; which are rendred more efficacious being joyned and coagulated with Spirit of Niter. 10. *Sudorifics* or *Diaphoreticks* among emptying Medicines, are accounted very profitable in an *Anasarca*, but of no use, or rather hurtful in an *Ascites* and *Tympanites*, unless in their declination or end, to discuss the reliques of the watery humour by the habit of the Body. Decoction of Guajacum given forty days together has cured many, it may be made with steeled Water and Wine. *Antimonium Diaphoreticum* is much commended, for that it cures without manifest evacuation, it being calcined with Salt-Peter till it is white ; so also *Mercurius Diaphoreticus* ; but the Diaphoretick made of the Butrer of Antimony, cures all kinds of Dropfies best. *Rulandus* commends this : Take Juniper-berries bruised M.iii. Sack q. s. boyl to the consumption of the half : Dose ℥ii. every Morning, covering warm

warm after it. The Sudorifick of Barbet; Take *florence Orrice* ℥i. *Sarsa, China, A.* ℥iii. *Guajacum* lbiss. Water q.s. Infuse twenty four hours; boyle a little, strain and evaporate with a slow fire, till it comes to ℥iii. which dissolve in Parsley water ℥xvi. Elixir of Citrons ℥xii. strain again through Hippocrates his sleeve, and sweeten it moderately with Juleb of Roses. Dose ℥is. or ℥i. taken cold twice a day. To these add Liquor, Oyl, or Arcanum of Lungwort ℥ij. taken in Essence of Fennel which is a specifick especially in a Tympany, Spirit of Guajacum and of Dwarf-Elder, Powers of Juniper-berries, of Oranges, of Limons, of Cumin, and of Carraways. The Sudorifick of Dr. Willis: Take raspings of *Lignum Vitæ* ℥vi. of *Sassafras* ℥ij. of each of the Sanders ℥i. of Ivory, Harts-horn, A. ℥ss. infuse and boyl in spring water lbviii to lbiv. adding *Calamus Aromaticus*, lesser *Galangal*, *Burdock*, *Butterbur-roots*, A. ℥i. *Sage*, *Germander* dried, A. M. ii. strain and give ℥viii twice a day warm: to every Dose add gut. xx. or xxvi of Spirit of Sal Armoniack drawn with Amber, or Spirit of Soot: or ℥j of *Tinctura Salis Tartari*. § II. The last order of Medicines of the first intention, are Topicks; you may foment the Belly or swelled part with Boys Urine lbiv. in which *Lapn Prunellæ* ℥iii. has been dissolved by boyling. *Aqua pendens* commends Lime-water, in which he dips a Sponge which will comprehend the whole Belly, this he strains and binds on, it warms and dries the Bowels,

and dissolve the hardness of the Spleen: *Claudius* commends a Lime-water made of Sulphurous or Saline Bath Water, and used as aforesaid: after fomentation, anoint the Belly with Oyls of Dill, Rue, Flower-de-luce, mixt with Pouder of Bay-berries: Or with Oyl of Scorpions of *Mathiolus*, mixt with a little Chymical Oyl of Rosemary: Or with *Unguentum de Artanita*, which purges away the Water: The Thighs, Leggs and Feet may be fomented with a Lye in which Roots of Dane-wort, and Elecampane, leaves of Rosemary, Sage, Time, Marjoram, Hyssop, Savory, Bays, Organy, Penny-royal, Salt and Alum have been boyled, and if you please you may add a little S.V. After Fomentations and Anointings you may apply this Cataplasm: R Cow-dung dried lbj. Pigeons dung ℥ii. roots of Bryony, Orrice, Bay-berries, A. ℥i. *Asarum* roots, Cumin-seeds, Sulphur, A. ℥ss. Sapa or simple Rob. q. s. mix them, and apply it hot. Or you may apply a Cataplasm of Radishes bruised, to the Navel and Reins which provokes Urine and Stools: Or a Cataplasm of Snails bruised with their Shells, which must be kept to the Belly, till it falls off, of its own accord, it draws forth Water violently. Or you may apply Emplasters, as R *Emplastrum de bacca Lauri* ℥iii. dried Cow-dung and Pigeons-dung, A. ℥x. red Roses ℥i. Cumin and Carraway seed, A. ℥v. Oyls of Rue and Turpentine. A. q. s. make a Plaster. Or Take wild Cucumer-roots, well bruised,

and steeped in Vinegar of squils twenty four hours : clarified Honey ℥ii. boyl to the thickness of a Cerate, adding in the end Pouder of Cumin-seed ℥iv. make an Emplaster for the Belly to be renewed every day. The Plaster of Valeriola. ℞ Cow-dung ℔i. Goats-dung ℔ss. boyl in strong Vinegar. with it mix flowers of Sulphur ℥iii. Alum in fine Pouder ℥i. juyces of spurge and Ebulus new drawn, A. ℥iii. Lupins and Orobus Meal, A. ℥ii. powder of soldanella, Annū, Fennel, Cumin, decripitated Salt, A. ℥iii. Turpentine ℥iv. Pitch ℥vi. mix for a Plaster. Wierus saith, That a Toad found in the Woods, cut through the Belly, and ryed to the Reins, doth provoke Urine violently. Or this Cerate : Take Toads ℔ii. juyce of Ebulus ℔iii. Oyl ℔i. Wax ℔ss. boyl in a luted pot to the Consumption of the half, then strain for a Cerate ; apply it upon Leather to the Spleen, and it will evacuate all Waters. § 12. The second Intention is the removal of the Morbifick cause, that after the Water is once evacuated, no more may be gathered together anew. For this purpose all those things which we have prescribed in the Obstructions of the Liver and Spleen are here profitable, chiefly powerful aperitives mixt with strengtheners. Conserve of Sea Wormwood is of singular use: so also Conserve of Roses mixt with Crocus Martis aperitive, or Vitriol of Mars, and sharoned with Oyl of Vitriol: Or the Pouder of a Toad dried and calcined in an Oven, which Petreus reports, being taken ad ℥ss. in Wine doth wonderfully

expel the Dropsy by Urine; And we can speak by experience, that it removes the Cause of the Water to admiration : the first Inventor hereof desiring to destroy himself, was cured thereby, contrary to his Expectation. Foment the Stomach and Liver with this : Take Powers of Oranges, Limons, and Cloves, A. ℥i. Powers of Rosmary and Wormwood, A. ℥ss. mix them : afterwards anoint with this : ℞ Oynment of Roses and Cerate of Sanders, A. ℥ii. distilled Oyls of Limons, Oranges, and Nutmeggs, A. ℥ii. Oyls of Wormwood and Mastich, A. ℥i. Wax q. s. make a Liniment : afterwards apply over all Ceratum Galeni, for it drys up all humidities strengthens much. As for Diet, they must drink little, and sparingly, indure thirst as much as may be, and eat meats which dry. and expel Wind, avoiding all sweat Meats as perfect Poyson ; by such a regular Course some have been cured without any other means : for Drink let him use Infusions or Decoctions of Elecampane, Wormwood, Juniper. Guajacum, Sassafras or Madder, which last provokes Urine very much either alone or with White Wine : so also the Quintessences or Powers of Wormwood, Juniper-berries, Cloves, and Carraways given ad gut. xxvi in a proper Vehicle, more especially the steeled Wine of Finkius. § 13. The third Indication is restorative, which teaches how to fortify the spirits, strengthen the Viscera, chiefly the Liver and retrieve their prestin healthful Estate. This is done
first

first by Cordials, as *Rx Camomil and Wormwood Water*, A. ξ iv. *Angelica Water* the greater composition, ξ ii. *Tinctures of Cinnamon, Saffron and Crochel*, A. ξ ii. *Harts-horn calcined* ξ ss. *white sugar candy* ξ i. mix: Dose four spoonfuls three or four times a day. Or *Take Conserve of Wormwood and Roses*, A. ξ i. *Confectio Alkermes & de Hyacintho*, A. ξ iii. *Pearl, Coral prepared*, A. ξ ss. with syrup of the juice of Citrons make a Confect: Dose ξ iii or iv. Morning and Evening. Secondly, by Hypnoticks. *Take Aqua Cinnamomi* ξ i. *syrupus de Meconia* ξ ss. mix them to take late at Night. Or *Rx Aqua Angelica magis composita* ξ i. *Diacodium* ξ iii. *Tincture of saffron* ξ ii. mix them, Dose one one spoonful at Night: Or you may give Syrup of Poppies in Scordium Water Compound: Or *Laudanum* à gr. j. ad iij. or more. Thirdly, by things quenching Thirst, because Thirst is for the most part a perpetual Symptom, and drinking much is very pernicious. *Rx Whey* \mathfrak{lii} . clarify it, and dissolve therein Pulp of Tamarinds ξ ii. juice of Limons ξ ss. syrup of Poppies ξ iii. Dose two or three Spoonfuls. Or *Rx conserve of Wood-sorrel* ξ iii. *Pulp of Tamarinds* ξ ii. *Sal prunella* ξ i. *syrup of Corn Poppies*, enough to make a Lo-hoch of. § 14. Hitherto of the cure of a Dropsy in general; in what follows we shall make some special remarks upon each species in particular: and first upon an Ascites; Among Internal Med cines, Elixerium is the most powerful Hydragogue and against an Ascites the chief Weapon of the Empe-

rical Magazine, for it happily working, the asswaging of the Abdomen doth sometimes succeed, Dose à gr. iiii ad x. or xv. either by it self, or corrected with Spices, or mixt with other Hydragogues. Among Diureticks you ought to use such whose Salts are Volatile, not such as are acid or lixivial, for that they do more hurt than good. You may exhibit a proper Clyster, which may draw the Serum out of the Vessels and Glandules of the Guts and Mesentery, without fusion of the whole Mass of Blood, which the stronger purgers do excite. *Rx Urine of a sound Man that drinks Wine* \mathfrak{li} . *Venice Turpentine* (dissolved with the yolk of an Egg) ξ ss. *sal Prunella* ξ ss. make a Clyster which repeat daily. Over the Belly apply an Emplaster which may have an astringent and corroborating Virtue in strengthening the Bowels, as *Diasaponis* which has been applyed with success. Or this: *Take Emplastrum de Minio, Stricticum Paracelsi*, A. q. s. mix, and make a Plaster to be applyed to the Abdomen. Or *Take Emplastrum de Minio, Oxycroceum*, A. q. s. mix for a Plaster. § 15. But if all the things prescribed against an Ascites do nothing, which is when heaps of Waters overflow the Cavity of the Abdomen; then, as Catharticks do absolutely no good, so Diureticks are always given in Vain, for as much as they draw nothing from this Sea of Waters, but rather by a continued fusion of the Mass of Blood, dayly increase the same. In this Case, the most

most present remedy is a *Paracentesis*, though it as often kills the Patient, as cures the Disease; how to perform it, see it in *cap. 15. sect. 21. 22. foregoing*. It ought not to be administered to such as are of an ill habit, who have been long sick of the Disease, and in whom the Conformation and Temper of the Bowels are wholly depraved; for thereupon, the Spirits immediately faint, and the strength is dissolved, and a new illuvies of Waters succeed. But in such as have been formerly healthful, and of sound Bowels, it is to be admitted, though not at first: yet it ought not to be too long deferred; least delays (whilst the Bowels remain along time drowned) beget a total depravation and from thence Death follows unavoidably. § 16. *Remarks upon a Tympanites*. Strong Catharticks, rather increase than diminish the matter causing this Disease, because they disturb the Spirits, and force them up and down impetuously, whereby the passages of the Fibres are more dilated and opened, and thereby way made for the matter tumifying; the same thing almost in like manner do Diaphoreticks, for they impel the Spirits and morbidick particles deeper into the fibres, and also rarify the said particles impacted, so that taking up a larger space, the Inflation and Intumescency is yet made greater. Hence it appears that a Tympanites must have its remedies from Diureticks, Clysters, and Topical application. But Elastick or Impul-

five Medicines which are all such as abound with Volatile Salts, as Spirits of Harts-horn, of Soot, of Sal Armoniack; as also Tinctures, Elixirs and other Medicaments, endowed with Volatile Salts or active particles of another kind, do render the stoppages greater and more fixt; by ensixing the matter deeper, and also acquire heat, and a troublefom thirst in the sick; in somuch that melting the blood and nervous juyce, and stirring up the Spirits, the particles deposited by each of these are compelled into the Abdomen, thereby causing it to swell the more. § 17. *However that the Antecedent cause may be dissolved as well as the conjoynd; it may be necessary in some measure to aim thereat, that the Disease at least may receive no augmentation*; for this purpose mild and gentle purgers may be admitted, as Tincture Solutiva, Quintessence of Damask Roses, Vinum purgans Mynsichtii, as also Our Diet in *Cap. 26. Sect. 18. § 16.* made up without the Volatile Salts. Dr. Willis prescribes this; R Peach Flowers, Damask Roses, A. P. ij. Broom, Elder, Centory the less, A. Pj. Agrimony, Roman-Wormwood, A. Mj. Sena ʒj. Rhubarb ʒvj. Carthamus seeds ʒss. Dwarf-Elder, Galangal, Yellow Sanders, A. ʒij. cut, bruise them, and put them into a silk Bag, which put into a glass, with white Wine lbij. Saxafrage-water lbj. Salt of Tartar ʒiss. digest 48 hours; then give the sick ab ʒiiij. ad ʒvj every third or fourth day. Or this in a hotter Constitution; R purging mineral-waters (as of Bar-

Barnet, Epsom,) ℥viiij. Sal Absinthii ℥ij. evaporate in a gentle Bath to ℥ij. to which add Rhubarb ℥vj. Mechoacan, Turbith, A. ℥iiij. yellow Sanders ℥ij. cloves ℥j. digest close and warm for three or four hours, then filter or strain: Dose ℥ij. or ℥iiij. § 18. Now for the removal of the conjoynd Cause, we prescribe first frequent Clysters: as, R Infusion of Stone-horse Dung, or Dogs-turds, with Camomil Flowers ℥ij. Honey of Herb Mercury ℥ij. mix them: Or Take Emollient Decoction ℥ij. Sal prunellæ or Sal Armoniac à ℥j. ad ℥jss. make a Clyster. Or exhibit those at § 8 foregoing. Secondly, Diureticks: Take fresh Juniper-berries, Elder-berries, A. ℥vj. Firr tops ℥iiij. Green Walnuts ℥ij. Cortex Winteranus ℥iiij. Orange Peels N° vj. Limon Peels N° iiij. seeds of Ameos, Cresses, Rocket, Mustard, Dill, A. ℥jss. cut, bruise, and add white Wine ℥vj. Distil in common Organs, mixing the whole Liquor. Dose ℥ij. Or Take of the former water ℥ij. Plantane, Chervil, and Cliver leaves, A. Miiij. bruise them well, mix, and press out strongly: Dose ℥ij. two or three times a day alone, or with this following. Take Millipedes living and cleansed ℥ij. one Nutmeg sliced, beat them together, and put on them the former water ℥ij. press them strongly out. Dose ℥ij. or iiij. twice a day if taken alone; or ℥ij. if mixt with other things. Thirdly, Topical applications. These must not be hot and discussive, but filled with a Volatile Salt, and Nitrous, which may dissolve the combinations of other Salts, and loosen the

impactions of the Spirits. Helmont reports, that Cabrocius cured one of 80 years of Age, whose Belly he fomented twice a day with a Lye, in which he boyled Salt, Alum and Sulphur, and after applied Cow-Dung for a Cataplasm. Willis prescribes this: Take Flowers of Sal Armoniac ℥j. Sal Prunellæ ℥ij. S. V. having much slegm in it ℥ij. mix, dissolve, and foment therewith, with a cloth dipt into it warm, and applied to the whole Belly, changing and wetting it again in half an hour; do it twice a day, and after apply a Cataplasm of Cow-Dung, with powder of Dogsturd in it; Or Empl. Diasaponis, viz. de Minio with Venice Soap, spread on thin leather, and applied to the whole Belly, to be renewed once in 10 days. § 19. For preservation, Hartman commends the Liquor of the Flowers of Tapsus barbatus or Mullein, as a Specifick: put the fresh Flowers, being well bruised into a Vessel, stop it close, put it into an Oven with Bread; after which strain out the Liquor, and distil it in B.M. Dose à ℥j. ad ℥jss. in water, or Decoction of Fennel seeds and roots: Or Take powder of Aron roots, Crabs Eyes, A. ℥ij. sal prunellæ, Vitriol of Mars, A. ℥ij. sugar of Rosemary Flowers ℥ij. mix: Dose ℥jss. twice a day, in the distilled water at § 18. above, or in the Magistral water of Snails and Earthworms, A. ℥ij. If Ants Eggs ℥jss. Liquor of Tapsus barbatus ℥j. be added to the Composition, it will be so much the better: Chalybeats may also be used here; not such

such whose Sulphur remains still and predominates, which too much ferments the juyces of the Bowels, and exagitates the Blood and Spirits, making thereby a greater swelling: nor such whole both sulphurous and saline particles are chased away, as in *Crocus Mars*, made by long calcination, which rather fixes and makes the Disease more obstinate: but such where the Sulphur is expelled, a Vitriolic Salt remains, as in *Salt or Vitriol of Mars*, &c. § 20. *Remarks upon an Anasarca.* The Cure of this, is to be begun with Purg- ing, with such things as we have mentioned in the beginning of this Section, that thereby the Morbifick matter may be evacuated; and in this cure, all Hydragogue Medicaments both simple and compound are admitted, even the strongest purges, which profit very much, especially if the time when, how long, and the kind of the Cathartick used be but considered; and the reason is, because the Morbifick matter subsists partly in the mass of Blood, partly in the habit of the Body; so that a strong Cathartick presently dissolves and troubles the mass of Blood, and stirs it up to the excretion of the said matter. § 21. *After purgers, you may use Diureticks, but such as have a fixt and lixiviate Salt, which do indeed far excel other Salts, in the cure of this Disease; many of which we have enumerated in § 9. foregoing to which we referr you: These Diureticks you may either use alone, or alternately with Dia-*

*phoreticks, which in an Anasarca, prevails more than in other Dropsies; several of these in § 10. foregoing we have described. § 22. Now follow Topicks; first, Frictions which in a Leucophlegmatia and Anasarca are used with good success; the whole Body is to be rubbed twice a day with a coarse cloth, or a little Brush, fitted for that purpose. Secondly, foment the part With a Lixivium made in Wine, or with water in which Salts and the Fæces of Wine have been boyled: Thirdly, anoint with Liniments made of Sulphur, Salts, and other minerals, mixt with Mucilaginous Extracts of sharp Herbs, and a sufficient quantity of Oyl of Scorpions. True and pure Oyl of Scorpions is known to afford notable help, being used by it self: Dr. Willis saith, that he knew a boy much swelled with an Universal Anasarca, was cured by this remedy, alone; for his Mother anointed his whole Body, morning and evening with Oyl of Scorpions, rubbing all the parts with her hot hand, by which in three days he began to pour forth abundance of Urine, which continuing so for some days, the swelling vanished by little and little, and he became sound: Fourthly, apply Vescatories if need be, but with great caution, least by weakness of the heat, and the great illu-
luries of Water, there should follow a prostration of the Spirits, and in short time after a Sphacelation or Mortification, wherefore they are seldom or never applied to the Leggs and Feet,*

Feet; but sometimes to the Thighs and Arms with security. *Fifthly, Escharoticks* which evacuate waters with success; they are safer than Vesicatories, because the water comes away by little and little, to a great Flux; also because the solution of Unity is defended by the *Eschar*, against the loss of heat, whereby the fear of a Gangreen is less. A certain Emperick did it thus; first he fomented the legs morning and evening, with a Decoction of Dwarf-Elder, Wormwood, Camomil and other hot herbs, in Lees of Ale or Wine; between the times of Fomentation, he applied a Cataplasim of the mass of that Decoction with Bran: After three days he covered both Legs and Feet with a Plaster of Burgundy Pitch, leaving a small hole in each Calf about the bigness of a Nut, in which he put an Escharotick on the bare skin, made of the ashes of Ashen-Bark; which after 12 hours being removed, a small Eschar was left, from whose Pores water came, at first slowly, sweating out; afterwards more plentifully to drop out; lastly, the Eschar falling off, the flux was more abundant, as from an open Spring, till the whole Legg, both above and beneath was drained. *Sixthly, Pricking with Needles*, which ought to be cautiously used, lest too great a flux be caused: let the Needle be thrust into the skin (where the greatest swelling is) so far as that Blood follows not, making at one time 6 or 7 such holes, a thumbs breadth distant one from another; from

these holes the water will come forth by drops, and that continually, till all the swelling vanishes; this pricking may be done once or twice a day, in this or that member, or in several parts together, so will the Hydropick illuvies be exhausted, and if proper inward Physick be given, the Disease will be the easier cured. I knew a certain Emperick succeed well in this, by pricking the Legs with a Pen-knife: And another by applying to both legs dried Bramble twigs, whose manifold prickings made a very strange and successful evacuation. § 23. *The preservatory Intention, or that which removes the morbid Cause, is our last consideration; in which Chalybeate Medicines do much good, and indeed it is thought that the whole scope of curing depends upon this remedy:* but Salt of Steel, or Vitriol of Mars, and others prepared with Acids, and deprived totally of Sulphur, do not help, nor promote the fermentation of the Blood, but rather on the contrary fix it: but in this Disease, and a Cachectick habit of Body, we intend those Chalybeates wherein the sulphurous particles are left, and are predominant, as first, filings or scales reduced into fine powder; then Steel dissolved with Sulphur and powdered. These are presently dissolved by the Acid Salts in our Bodies, whence the Sulphurous particles being set free, and brought into the Blood, they ferment the whole mass thereof, and being conjoynd therewith, give vigor to the Blood, renew

its sanguifying power, and convert the pale, green and yellow color of the Face, into a fresh and florid. This following is an Excellent preservative; R Steel prepared with Sulphur, or rust of Iron ℥j. Compound powder of Aron-roots, powder of Earthworms, of Millepedes, of Winters Bark, A. ℥ss. Salt of Wormwood, Egg-shells calcined, lesser Galangal, Cubebs, grains of Ebulus, A. ℥ij. Cloves, Nutmegs, Ginger, A. ℥j. Sugar of Rosemary flowers ℥ij. make a fine powder, Dose ℥j. morning and evening, in the magistral water of Earth-worms or Snails, or in Dr. Willis his Sudorifick at § 10. aforgoing, or in Decoctum Sudorificum Emperici Germani, or in a Guajacum Diet.

V. Εξανθήματα, Exanthemata, Ecthymata, Variolæ, The Small Pox.

§ 1. In this Disease we have five several Indications of Cure; first, the assisting of Nature in the Expulsion of the Pox: secondly, The opposition of the venomous and malignant quality: thirdly, The defence of the Parts: fourthly, The correcting and removal of the Symptoms: fifthly, The evacuation of the Reliques of the Disease.

§ 2. The Expulsion is performed with Diaphoreticks or Sudorificks; as, Pulvis ex chelis Cancrorum, Pulvis foelis (in Tom. 4. Lib. 9. Sect. 5.) thus made: R Seeds of Watercresses and Brook-lime, A. ℥j. powder of Unicorns-horn ℥j. or of Harts-horn ℥ss. Pearl and red Coral prepared, A. ℥j. make all into fine powder; Dose ℥j. for this purpose Terra Sigillata is good, seeds of White-Turneps,

a Decoction of Lentills with Fennel seed and Gum Traga-canth; so also Bezoar Minerale, Antimonium Diaphoreticum given in Essentia magna, or Tinctura Diaphoretica Paracelsi, giving also in the Intervals, Tincture of Saffron, or Cochinele in good Sack, or a Confect of Salt of Pearls, made up with Pulp of a roasted Quince; Or Tinctures of Tartar or Coral in Elect. de Ovo, or with Confectio Alkermes; or Electuarium ad Tabidos, Rhazis, Avicenna, and all the Arabian Physicians commend this: R sac Figs ℥vij. Raisons ℥v. Lentils ℥ij. Gum lack ℥ij ss. Gum Tragacanth, Fennel seeds, A. ℥ij. Saffron ℥j. fair water ℥ibls. boyl to the third part, and give the sick to drink. § 3. The Venomous and malignant quality (which is most apparent in an Epidemical Small Pox) is to be opposed by Antidotes, as Mithridate, Venice Treacle, Electuarium de Ovo; And by that which is above all, Our New London Treacle, which performs things of this nature to a wonder: to these you may add, Confectio de Hyacintho, Bezoar Stone, Prepared Coral, Pearl and Harts-horn, Bezoar Animal, Oyl of Scorpions of Mathi-olus, which ought to be frequently used; and indeed all those things which we propound in the Cure of Malign and Pestilential Feavers, and of the Plague it self. § 4. The defence of the Parts. The Eyes are to be rubbed with pure Gold, or Anointed with Rose water, in which a little Camphir and Saffron has been infused; if they

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cannot be opened, they are to be fomented with warm milk, or a Decoction of Barly, or with this following, which doth more effectually preserve them: *R* Rose and Plantane water, *A*. ℥i℥s. powder of Sumach seeds ℥ij. Infuse warm for a while, strain hard out, and add to it Camphir gr. x. Saffron gr. vj. If some Pox begin to peep out in the Eye it self, Pigeons-Blood must be often put in to hasten their resolution: Then wash with this water; *R* red Rose water ℥ij. Eye-bright water ℥ss. white Troches of Rhasis ℥j. Tutty prepared ℥j. Camphir gr. vj. Saffron gr. iij. make an Eye Water, with which wet the Eyes often. When the Eyes are opened, if clouds appear in them, they are to be washed away with white Sugar Candy, finely powdered. If they be Ulcerated; *R* washed Ceruse ℥iij. Sarcocol ℥j. Tragacanth ℥j. Opium gr. ij. with Mucilage of Tragacanth make Troches; which upon occasion dissolve in Breast Milk or Rose water, and wash therewith. To preserve the Nostrils, apply a Nodule of Sanders and Camphir, dipt in Rose-water; if they be closed, you may anoint with Oyl of Sweet Almonds: the sick ought often to smell to Vinegar, Or put Tents up the Nostrils dipt in one of the former waters: if an Ulcer happen, you must apply to it a Liniment made of Oyl of Eggs and juyce of Plantane, well rubbed in a leaden Mortar. To preserve the Throat, you ought to Gargle or swallow a little *Diamorum* mixt with Barly water and Hony of Roses. Or

this, *R* French Barley P. j. Plantane-leaves M. ij. red Rose Leaves. P. j℥s. Balaustrans, Sumach seed, *A*. ℥ij. Water ℥ij. boyl to the consumption of a third: strain and dissolve therein Honey of Roses ℥ij. or instead thereof Syrups of Mulberries and Pomgranates, *A*. ℥j. mix for a Gargarism. If an Ulcer is bred in the Throat or Jaws, cleanse it with Alum water, and Honey of Roses; and if it be very foul mix a little *Aegyptiacum*, or *Fuscum Wurtz*; therewith. The Internal parts are preserved with Decoction of Lentills, Gum Lac and Tragacanth before described; for Tragacanth defends the Breast; Lac the Liver and Spleen; and Lentills the Guts. The Lungs are preserved by Conserues of Roses and Violets, and Syrups of dried Roses, Jujubes, Myrtles and Poppies: Or by this; Take powder of Lentills ℥iij. white Poppy seeds ℥j. Conserue of Roses ℥ij. syrup of Mulberries, q. s. make a Lohoch; Or, Take syrups of Violets, Jujubes, and dried Roses. *A*. ℥j. syrup of Poppies ℥ss. mix them; to be often lickt and swallowed down leisurely. The Guts are preserved by the former remedies; So also the Kidnies; but if they are exulcerated, whence arises pissing of Blood, you must give an Emulsion of the 4 greater cold seeds with *Trochisci Alkakengi*, de *Carabe*, and other things of like nature. § 5. The Correcting or removing of the Symptoms. First, the too great Ebullition, wherein the Pox breaks forth so violently, that they ought to be restrained, otherwise the sick is de-

destroyed. *Amatus Lusitanus* Cent. 3. Obs. 18. did it with Syrups of Roses, of Succory Simple, of Endive and Violets, with waters of like nature mixed with them; anointing the Breast with *Ceratum Santalinum*, and a diet cold and moist, by which the morbidick matter became thicker, and the Flux bridled: for ordinary drink, give Barly Water in which Sorrel-roots have been boyled. Secondly, a *Dyarrhæa* or *Dysentery*. You must first use deterfive and lenitive remedies, and afterwards Astringents; give Clysters of Chalybeated milk, Sugar and yolks of Eggs; and after, Clysters again of Decoction of Plantane, Knot-grass, Self-heal, and other things mentioned in the Cure of a *Dysentery*; some add syrup of Poppies; or *Liquor Vitæ Anodynus* ad $\zeta ij.$ or $\zeta iij.$ which is a singular Experiment. If the looseness be caused through Worms, there is danger of Death. Thirdly, an *Epilepsy* or *Convulsion*, when the Membranes and Nerves are beset with the Pox, wherein you must have respect to the Cure of those Diseases. Fourthly, *Hard Swellings*. These are to be dissipated with Emollients and Discussives, without suppuration. Fifthly, *Deafness* or *thicknes of Hearing*; where evacuation being premised, either Vescicatories, or Vapors received into the Ears are useful. Sixthly, *running Ulcers*. These after the force of the Disease is over) are cured by Universal purgations of a cooling nature, injecting or washing the Ulcers

with Our *Aqua Ophthalmica*, and applying over the part *Emplastrum de Galbano Crocatum Mynsichti*: *Riverius* advises to use *Unguentum Album Rhasis*; Or this, Take calcined Lead $\zeta ij.$ Litharge $\zeta j.$ washed Ceruse, Vinegar, A. $\zeta ls.$ Oyl of Roses $\zeta iij.$ Honey of Roses $\zeta j.$ Myrrh $\zeta ls.$ Yolks of Eggs No. *iiij.* Wax, enough to make an Oyntment. Seventhly, The *Pocky Pustles*. When the Pox are ripe, high, and white (which is about the ninth day) anoint them with a feather, twice a day, with Oyl of sweet Almonds, drawn without Fire, till the Scabs fall off; for this tempers the sharpness of the matter, hastens the full ripening of the Pox, and procures the falling off of the Pustles; which otherwise sticking fast, exulcerate the skin deeply, thereby causing marks and scarrs. Oyl of Nuts by expression is excellent for the same purpose. Some advise when they are ripe to bore them through, with a golden or silver Pin, but this practice is now grown out of use, for that Experience has taught us that they are longer in healing, the Crusts lye longer on, and oftentimes the marks left behind are greater. Eighthly, *Itchings*. These are commonly when the Pox begin to ripen, chiefly, in the Face, Palms of the Hands, and Soles of the Feet, where the thicknes of the skin hinders the eruption of the Pox. The hands and feet are remedied by holding them in hot water: the Face moisten often with *Decoctum Commune*, or *Refrigerans*, a little

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warm, by dipping a thin rag therein, and applying it gently to them. *Ninthly, Marks and Scars of the Small-Pox, or Pock-holes.* These are hard or scarcely possible to be removed, but the things following by Authors are commended; *Oyl of Eggs* which does nourish and ingender Flesh, and therefore very fit to fill the Pock-holes: *fresh Weathersuet*, melted, and laid on with a Feather, which is good for the same purpose. Or this of *Foretus* which he highly magnifies: *R. Oyls of sweet Almonds, and White Lillys, A. ℞i. Capons-grease ℞ss. powder of Peony-roots, of Or-rice, Litharge of Gold, sugar candy, A. ℞i.* mix all well in a warm Mortar, and anoint therewith Morning and Night. § 6: *The evacuation of the Reliques of the Disease.* It is best done with things Lenitive and Liquid, as *Liquor Catharticus* with Manna; *Decoctum Catharticum Quercetani, Fumaria Compositum: Infusio Cathartica, Seri Lactis Mesuae* first and second, *Tinctura Solutiva*: Or the Decoctions, Tinctures or Infusions of *Rhubarb, Cassia, Manna, and Tamarinds, Syrup of Roses Solutive, Diacassia* with Manna, *Diaprunum Lenitivum, & Solutivum, Catholicon, and Electuarium Lenitivum.* If the Belly is hard bound, it ought to be mollified first with a Clyster of Broth or Milk: Or a Decoction of French Barley, Raisons and Liquorice with Sugar and Yolks of Eggs: Or with a Suppository of Honey alone without Salt: Or made of Sheeps or Deers Suet, or of a

Candles end, twice or thrice exhibited. See cap. 22. sect. II. § 5, 6, 7, 8.

VI. φθορά ἀφροδισιαστικῆς, Lues Venerea, Syphilis, Morbus Gallicus, *The French Pox.*

§ 1. *Many are the Ways which Authors have delivered in order to the Cure of this Disease, but we whose purpose only the benefit and health of the Sick, shall shew but two, excellent in the manner, facile in the operation, and certain to the purpose intended.* The first way is without Salivation; the other with it; the use of the latter of which, we only intend when the Powers and Forces of the Medicaments, there made use of, fall below the Poyson and Malignity of the Disease afflicting; which for the most part happens to such who live perpetual debauched Lives, dissolute in their Diet, have frequent Coition with unclean persons, had many Claps, been often ill cured, and whose present Pox is become Inveterate, seizing as it were the whole habit of the Body with all its Faculties and Functions.

The Cure without Salivation.

§ 2. *The order of Medicaments removing the proximate, near or conjoynd Cause are Emericks, Catharticks, Sudorificks, Alexipharmicks, and proper Diets: wherein the Constitution, Age, Sex, Strength, Air, Season, and Inveteracy of the Disease are to be considered.* § 3. *First, Emericks are to be exhibited if the Sick be strong, and much foul matter lies impacted in the Stomach; and in-*
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deed both Emeticks and Catharticks ought to be ordered in the beginning, least there be hurt done to a foul Body by things Sudorifick and Alexipharmick: and they ought to be continued (especially Catharticks) all the time of the Cure: except matter be collected, as in a Bubo, &c. or sticks in the External parts, as in Pustles, Ulcers, &c. wherein purging does hurt, by drawing the Poysonous matter inward to the more noble parts: and hindering the Excretion or Abscess: and in which Case Sudorificks, Alexipharmicks and a good Diet, are the only proper remedies, giving now and than or once a Week a Lenitive or very gentle purge to cleanse the Stomach and Bowels. In the more weak Constitutions you may exhibit *Sal Vurioli*, one Dose in three parts; which you may repeat every other or every third day for four or five times. Some commend *Cambogia* with Wine of Squils: In stronger persons you may give *Crocus Metallorum*, or its Infusion, *Dr. Harveys Antimonium Resuscitatum*, *Aqua Benedicta Rulandi*, *Pulvis Mirabilis*, or the *Sal Tartari Emeticum Mynsichti*: If these prevail not, you may give *Mercurius Vita*, sweet precipitate White and Red (but *Vigo* gave red Corrosive precipitate à gr. ss. ad ij. or more.) Flowers of Antimony Emetick, Vomiting precipitate of Antimony, Sulphur of Antimony, red precipitate of Antimony, *Gryphus Mercurij Turpethum Mineral Vulgar*, and that of *Horstius* or *Mynsicht*, *Liquor Mercurij sublimati*,

Precipitatum Aureum, *Aurum Vita*, *Hercules Bovij*, *Vitrum Mercurij*, *Arcanum Corallinum*, &c. Some of these you may give in their due Dose made up into a Bole with Conserve of Roses, or some Syrup, and exhibit them once, twice or thrice, according to the strength of the Sick, and inveteracy of the Disease: but those which are Mercurial (that they may not flux or produce a Salivation) must be given with larger intervals of time between, and careful regiment, washing the Bowels (When the working is over) well with Chicken Broth, and giving some comfortable Cordial to refresh the Spirits. §4. Secondly, *Catharticks* which are if need be to succeed Emeticks, with the caution in the former Paragraph. The chief of these are *Agarick*, *Mechoacan*, *Jallap*, *Resin of Jallap*, *Scammony*, *Coloquintida*, *Cambogia* corrected, *Gum Guajaci*, *Decoction*, *Infusion*, and *Tincture of Colocynthis* (which last is a wonderful thing) *Mercurius dulcis*, *Sena*, *Infusion and Tincture of Sena*, *Tinctura Cathartica*, *Clossai*, *Tinctura Catholica*, *Cholagoga*, *Phlegmagoga*, *Melanagoga*, & *Hydragoga Grulingij*, *Extractum Diacarthamum Andernaci*, *Cholagogum Quercetani*, *Holagogum Andernaci*, *Panchymagogen Augustanum*, *Phlegmagogum Quercetani*, *Magistrale majus* & *minus*, *Catholicum Sennerti*, *Benedictum*, *Panchymagogen Hartmanni* & *Mynsichti*, *Pulvis Comitum Warvicensis*, *Hermodactylorum Compositus*, *Catharticus Universalis* & *specialis*, *Catharticus Sala*, *Catholicus*, *Melanagegus*, *Phlegmagogus*, &

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Cholagogus Quercetani, Purgans Schejeri, in Morbo Gallico *Herculis Saxonie*, *Diajallappæ Mynsichti*, *Benedicta Laxativa*, *Caryocostinum*, *Confectio Hamech* (which is an approved thing,) *Hiera Magistralis Pacchij*, *Electuarium Arthriticum Clossiei*, pro morbo Gallico, *Catharticum ex Esula*, *Pilula de Agarico*, *Aggregativæ*, *Aurææ*, *Cochlæ Majores & Minores*, *Diambræ*, ex duobus, *Mechoacanna*, de *Opopanace*, *Rudij*, *Catholica Mynsichti*, *Cephalicæ Mynsichti*, *Arthriticæ Schejeri*, *Cephalicæ Rhasis*, *Gummossæ Clossiei*, *Familiares*, *Rosatæ Mynsichti*, *Polychrestæ*, *Melanagoge*, *Hydragoge & Peruviana Mynsichti*, *Holagoge*, *Trochisci Albandal*, &c. Out of some of these here enumerated, you are to chuse that which will best suit with the Age, Constitution, Sex, and Strength of the Sick, and of that form which they can best take; with every Dose of which, you may mix *Mercurius dulcis* à gr. xij ad xx. or ʒss. *Turbith Minerale Verum Horstij*, or the Common, *Arcanum Corallinum*, *Gryphus Mercurij*, white precipitate, *Precipitatum Aureum*, *Auxum Vitæ*, *Hercules Bovij*, or some other preparation of Mercury, in a due and fitting Proportion: these Doses according to strength and operation, are to be exhibited every other day, or every third, fourth or fifth day, as the reason and prudence of the Physician shall see fit: Or the Tincture or Decoction of *Colocynthis* may be given twice, with sufficient intervals of time, and then you may exhibit one of the former enu-

merated Catharticks with *Mercurius dulcis* or some other preparation of Mercury in a just proportion by the Judgment of the Physician, repeating these last named things alternately several times, always keeping the sick warm, with Posset drink or Broth, and looking after them carefully. If the Sick is unwilling to be much confined, you may give *Pilulæ Mercuriales Herculis Saxonie*, commonly called *Ceruleæ*, and *Barbarassæ*, which may be given for thirty days together, upon the Assumption of each Dose, the Sick may drink half a pint of strong *Guajacum* Decoction, or a Tincture of *Sena* in White Wine, or in the aforesaid Decoction which is better. Or the famous Pills of *Thomas Turpin*, a London Chyrurgion thus made: R̄ *Pilulæ Aggregativæ* ʒiii. *Colocynthis* ʒii. Refine of *Scammony* ʒj. Crude *Antimony* ʒij. *Quick-silver* (killed with a sufficient quantity of *Turpentine*) ʒjss. mix and make Pills: Dose à ʒj ad ʒss. in the Morning fasting: with these Pills he did almost Miracles. Or R̄ *Pilulæ ex duobus* ʒjss. *Quick-silver* (killed with juice of *Lemons*) ʒss. mix and make a Mass: give them ad ʒss or ʒij as the former: but if you should find the Sick begin to spit, you may desist for some days, and then begin a gain, giving the same Dose every other day. To the former things you may add *Pilulæ purgantes in Lues Venerea*, *Pilulæ ad Luem Veneream*, *Probatiſſimæ ad Luem*. Or this which is a good Medicine, R̄ *Confectio Hamech* ab ʒss ad ʒj Syrup of

Roses solutive ℥j. *Mercurius dulcis* à ℥j ad ʒss. mix for a Dose. Or
 ℞ *Extractum Rudij* ʒss. *Mercurius dulcis* ℥j. Oyl of Juniper-berries
 gut.ij. mix and make four or five
 Pills for one Dose. *Nicholas Massa* reports many to have been
 cured with a Sole Decoction of
Sena with correctives and prepa-
 ratives continued for twenty or
 thirty days: the same thing has
 been done with a Decoction or
 Tincture of *Colocynthis*: and
 the same success others observe
 of *Confectio Hamech*, especially if
 mixt with *Mercurius dulcis*. Or
 ℞ *Antimonij resuscitati* à gr. iv.
 ad x. *Mercurius dulcis* à gr. xv. ad
 xxv. new conserve of *Roses* enough
 to make a Bolus: this may be re-
 iterated thrice every other day.
 Or, ℞ *Scammony*, *Colocynthis* in
 Pouder, *Mercurius dulcis*, A. ʒij.
Gum Guajaci ʒj. Ceruse of Anti-
 mony ʒss. Oyl of Cloves ʒss. Oyl of
Virriol gut.v. with Syrup of Buck-
 thorn q. s. make Pills. Dose
 manè à gr. xv. ad xxv. for twen-
 ty or thirty days. Or this,
 ℞ *Gum Guajaci*, Resin of Fallap,
Mercurius dulcis, A. ʒj. Oyl of Cin-
 namon gut.vij. with Syrup of Buck-
 thorn-berries q. s. make Pills:
 Dose à ℥j ad ℥ij. after the ta-
 king of these you may give half a
 pint or more of the Diet men-
 tioned cap. 26. sect. 18. § 16. a-
 foregoing. § 5. Thirdly, *Sudo-*
risicks which are then to be used
 after a due and sufficient cleansing
 of the Body for many days with E-
 mericks and Catharricks as the na-
 ture of the Sick and Disease requi-
 red. For this purpose is com-
 mended Spirit of Guajacum and
Sarsa, *Antimonium Diaphoreticum*,

Bezoar Minerale, *Bezoar Itone*, and
Bezoar Animale, *Spiritus ex tribus*,
 or *Mixtura simplex*, *Tinctura Dia-*
phoretica Paracelsi, *Decoctum sudo-*
risicum Empirici Germani, Tin-
 cture of *Guajacum*, Spirit of *Ebu-*
lus, Oyls of *Sassafras*, of *Juniper*.
 and of *Rhodium*, *Arcanum Persi-*
caria, *Hartmans* white and red
 Spirit of Mercury, *Aurum Potabi-*
le, *Stella Mercurij*, *Quercetans*
Diaphoretick Oyl of Mercury.
Bezoarticum solare simple and
 compound, *Sulphur Mercurij*, *A-*
quila Cælestis, *Tinctura Antimo-*
nij Basilij & Fabri, *Manna Anti-*
monij, *Tinctura Croci Metallorum*,
Hartmans Tincture of the Glass of
 Antimony, Tincture of the Sul-
 phur of Antimony, *Antidotus An-*
timonij aurea, *Nix Antimonis*
Diaphoretica, *Vitrum Antimonij*
Diaphoreticum, *Cerusa*, & *Diapho-*
reticum Antimonis given with
 Spirit of *Guajacum*, Sweating
 flowers of ʒ, *Confectio Anodyna*
Extractum Opii Anodynum, *Lauda-*
num Paracelsi, *Laudanum Nostrum*,
Laudanum Minerale, Our new
 London Treacle, Treacle-Wa-
 ter, with many other things of
 like kind. Or this, ℞ *Antimo-*
ny Diaphoretick ℥j. Ceruse of An-
 timony, flos sulphuris, *Mercurius*
dulcis, A. ʒss. Oyl of *Juniper* gut.
 iij. mix and make 5 Pills, for one
 Dose, to be taken 4 days together
 and Sweating after them. Out of
 these chuse the most proper for
 the sick, and such as may have the
 greatest respect to the Symptoms;
 which exhibit in the Morning fa-
 sting in some convenient Vehicle
 either solid or liquid, as the sick
 best fancies: then let the sick be in
 Bed, procuring Sweat also with

Bottles of hot Water, hot Bricks, or a warming Stone: Or they may sweat in a hot House: Or in Hartmans Chair: Or which is best, in that famous Balsam or Bath, lately erected in London at a vast Charge, which is indeed the most excellent and convenient of all the ways yet known, and which we here commend to as many as have occasion for this Operation. § 6. Fourthly, *Alexipharmicks* or *Venereal Antidotes*, which are exhibited in this Disease to eradicate the Malignity, Venom and Poyson of the Pocky Miasms, every where scattered over the whole habit of the Body. Among Minerals there are these Bezoar Minerale, Bezoar Solare, simple and compound, Bezoar Lunare, Panacea Mercurij, Aurum Vitæ, Manna Mercurij, crude Antimony, Tincture of Antimony, of Basil and of Faber, Manna Antimonij, Hartmans Tincture of the Glass of Antimony, Basils Tincture of the same, his Lapis Ignæus, Sal Antimonij, Aurum Potabile, &c. Among Vegetables, *Lignum Guajacum*, and its Cortex, *Sarsaparilla*, *Sassafras*, China-root, Juniper-wood, Box-wood, *Xyloaloes*, Cedar, Cypress, and Turpentine-wood, Oak and Beech-tree wood; Roots of Butterbur, *Hypericon*, *Persicary*, *Saponaria*, *Caruus*, *Balsamum Verum*, de Peru & de Tolu, Virginian Snake-root, *Contra yerva*, *Angelica*, *Gentian*, *Zedoary*, Extracts of *Caruus*, *Guajacum*, *Sarsa*, *Sassafras*, *Juniper*, *Box*, *Aloe-wood*, *Snake-root*, and *Contra yerva*. *Platerus* saith, That he has cured many with Juniper-wood; and *Scaliger* remarks the same: Others

have said as much of Oak-wood and Bark, as also of Box-wood and *Xyloaloes*: *Lignum Rbodum* is commended by some as an admirable thing: so also *Snake-root*, and *Contra yerva*, which transcend many other Medicines. But without doubt, the Bark, Gum and Wood of *Guajacum* excels all Vegetable Antidotes, next *Sarsa*, *Snake-root*, *Contra yerva*, and *Sassafras*: which may be given in Powder, Electuary, Decoction, Infusion or Extract, the Menstruum being impregnated with Salt of Tartar or Quicklime. *Guajacum* is hot in 3°. dry in 2°. Diaphoretick, Diuretick and Aperitive, opening Obstructions of the Liver, Spleen and Reins: it is *Alexipharmical* against most Poysons, Deterfive, Resolutive and Lenitive in a constipated Belly, which half an ounce of its Powder taken inwardly relaxes: It is good in all Phlegmatick & Rheumatick Constitutions, also for cold and moist Brains, Stomach and Lungs, against most cutaneous Diseases, as Mange, Erratick Pustles, Ulcers, &c. it performs its Antidotary Virtue through exciting a Fermentation, or rather precipitation, in the juyces and humours of the Body, whose malignant Vapours, are afterwards expelled through its Diaphoretick force: the best is that which is most ponderous, resinous and gummy: But the Bark is esteemed of greatest Power, because it is more resinous, and so more deterfive and discussive. These Antidotes may be given every day Morning and Night, drink

drinking after them a draught of Diet; but you may give them in such Proportion or Dose, as that they may not provoke Sweat but be given constantly every day: so will they alter the malign and pocky Habir, and cause an expulsion of the impure Miasms by an insensible transpiration through the Pores of the Skin. For this purpose we commend *Bezoarticum Animale*, *Pulvis Viperinus Sal & Vinum Viperinum*, *Liquor Alexipharmicus seu Scorbaticus*, as most admirable things, the last taken half a spoonful or more at a time in a glass of choise Canary every Morning and Evening for forty days; Or *R Gum Guajaci ʒij. Diagyrdium, Anrimonium Diaphoretick*, *flowers of Sulphur, Mans bones calcined, Mercurius dulcis, A. ʒj. Opium ʒss. Saffron ʒj. Oyl of Juniper-berries ʒss. mix and with Balsamum Verum q. s. make Pills: Dose ʒss or ʒj every Night for forty days. Or R White Wine ʒij. Venice Treacle ʒij. Balsam of Sulphur gr. vij. mix and make a Potion, it is accounted by some for a Secret. Tincture of Gum Guajaci given in Sack à gut. xx ad xxx. is an excellent thing, especially for cold Tempers: so also *Confectio Alkermes* of Our Prescription: *Balsamum Verum* given à gr. x ad ʒss or ʒj. or more: and *Balsamum Polychrestum* (mentioned in Our Pharmacopœia lib. 5. cap. 2. sect. 56.) given in the Morning fasting and at Night going to Bed à ʒij ad ʒss. for thirty days together. Or, *R spirit of Wine ʒij. Balsam of Peru ʒj. mix, digest in a glass close**

*stop, baking of it well and often: after two days add Opobalsamum ʒss. digest and bake them as before. Dose à gut. x. ad xxx. Or R Tin shavings ʒij. juyce of Rue ʒvj. juyce of Garlick ʒiv. Venice Treacle ʒjss. boyl at a gentle fire till half is wasted: this is good for such as are much extenuated and weakened through length of the Disease, or have a Pocky Atrophy. But this is to be noted, That in hot and cholerick Constitutions, Guajacum, Wood, Bark and Gum, are to be avoided; or at least used with Caution and seldomer, or mixt with things cooling and a little humecting; and in place of them, some (very wise and learned men) institute Juniper-berries, which are indeed excellent things. § 5. Fifthly, Proper Diets, through the constant use of which for thirty, forty, sixty or ninety days (according to the weakness or strength of the Disease) the old Pocky habit becomes thoroughly altered, and a new, salubrious habit produced: and by which means all the reliques of the Disease becomes absolutely extirpated root and branch. Of these Diets, there are many Recipes extant, as *Decoctum Sanctum*, *Decoctum Sudorificum Empirici Germani*, *Decoctum Ligni Guajaci Mynsichti*, *Decoctum Veneris*: a strong Decoction of the Bark alone, and of the Wood alone, mentioned in Our Pharmacopœia, lib. 1. cap. 2. sect. 14. and cap. 3. sect. 9. Or you may make the said Diet thus: *R Lig. Guajaci, Sarsaparilla, A. ʒss. Cortex Guajaci, Sassafras, A. ʒjss. Elecampane-roots ʒj. Liquorice, Juniper-berries, A. ʒss.**

℞ *Rain Water* ℥v. boyl to the Consumption of a third, strain, and give ℥v. Morning and Evening with ℥ss of Antimony Diaphoretick. Or this: ℞ *Guajacum*, *Sena*, *Aniseeds*, A. ℥iv. *Sarsaparilla*, *Hermadaets*, *Liquorice*, A. ℥iii. *Sassafras*, *Cortex Guajaci*, *Epithymum*, A. ℥ij. *Rhubarb*, *Stæchas*, A. ℥j. *Raisins of the Sun* ℔j. cut what are to be cut, and bruise what are to be bruised; put all into a Bag with a Stone in it, which put into three gallons of new Ale: let all work together, and when it has done, stop it up close: after four or six days drink of it every Morning ab ℥iv ad x. Or thus: ℞ *Guajacum* ℥xij. *Cortex ejusdem* ℥iv. *Sassafras* ℥ij. boyl a little in a Diet pot in *Rain Water* ℔xxiv. and in a gentle heat infuse all Night; in the Morning add *Raisins* ℔ss. *China*, *Sarsa*; *Liquorice*, A. ℥ij. boyl to the Consumption of half, cool, strain, and keep it for use, in stone Bottles in a cool Cellar: this is the Diet commonly used in Hospitals: but it would be much better, if the quantities of the Ingredients were greater, and the Menstrum, *Lime-water*, Or water impregnated with Salt of Tartar; and so the Diet only to be made by Infusion. Again, To the former Ingredients put water ℔xij. boyl gently for two hours; and keep this second Decoction for ordinary drink. Or thus, ℞ *Guajacum rasped* ℔j. *Fountain Water* ℔xiv. boyl to the consumption of the half; at the end add, *Polypody* ℥ijss. *Sena* ℥jss. *Hermadaets* sweet *Fennel seed*, A. ℥j. white and *Gummy Turbit* ℥jss. black *Hellebor*, *Gal-*

langal, A. ℥ij. *cloves* ℥i. infuse twenty four hours, boyl a little, strain, and keep it for use: Dose ab ℥iv ad ℥vj. every Morning for thirty days. Or thus: ℞ *Sarsa* ℥viiij. *rain Water* ℔x. digest twenty four hours: then boyl in a diet pot to the Consumption of a third: strain, and keep it in Glafs or Stone Bottles for use: after the same manner you may prepare a Decoction of *Sassafras*. Or thus: ℞ *rasped Guajacum* ℥xii. *Funiper-berries* ℥vi. *Rain water* ℔xij. digest and boyl in a diet Pot to the consumption of one half, strain and infuse therein *Sena* ℥ij. *Fennel* and *Coriander-seed*, bruised A. ℥j. after 3 days strain again and keep it for use: Dose ℥vj or more every Morning, for thirty, forty or sixty days. The Secondary Decoction for ordinary Drink: ℞ the Mugma of the former Decoction: *Rain* or *Fountain water* ℔xij. or xv. boyl to a Consumption of a third: then add *Raisins* ℥iiij. *Coriander-seed* bruised ℥jss. boyl a little, strain, and use it for ordinary drink. Dr. Harvey saith, A single *Guajacum Decoction* is judged proper for such as are Ulcerous, because of its potent desiccative quality: *Sarsa*, for dolorus; nodus, and tophus Patients, because of its subtil dissipative faculty; *China* for Hectick and Consumptive persons; and *Sassafras*, for such as are Rhumatick, Catarrhus, and Arthritick: these are to be mixt accordingly, for example sake: if the Sick be both ulcerous and dolorous, you may use *Guajacum* and *Sarsa*, joyntly together: if withal he be Consumptive

sumptive, let *China* be added, &c. But if only Ulcerous, a *single Guajacum Decoction* serves : if only Dolorous, a *Sarsa Decoction* only : However he advises to confide solely upon *Guajacum* in all manner of Cases, whether ulcerous, nodous, dolorous, consumptive, or rheumatick, as the only certain, and infallible, Vegetable Antidote. *The manner of using the aforesaid strong Decoctions is thus* : the sick is to take a draught Morning and Evening in his Bed, and Sweat upon it an hour or an hour and half, twice a day, as his strength will permit : or if weak, to Sweat but once a day in the Morning, taking the same at Night without Sweating : this course ought to be taken thirty, forty, sixty or ninety days according to the malignity of the Disease, and strength of the Patient. However this is to be observed, that every fifth or sixth day must be set a part for Purgation either by *Emeticks* or *Catharticks* as the Indications mostly require : if *Emetick*, exhibit *ſ Vita, Aurum Vita* : Or some such like : if *Catharticks* give this : *R Pilulæ Rudij à ʒj ad ʒſs. or ʒij. or Resin of Fallap à gr. x. ad xvj. Mercurius dulcis à ʒſs. ad ʒj. or gr. xxvi. Oyl of Cloves gut. ij. mix and make Pills for one Dose.* § 8. *The General Dietetick for the Pox.* Let the Sick be pleasant and cheerful, avoiding Passion, Anger, Melancholly, Fears and deep Studies : let him use moderate Exercise, as walking and stirring up and down before Meals, that thereby the Spirits may be ex-

cited, and the excretions of the Body advanced ; together with the natural distributions of the *Chylus* and *Chymus* ; but violent Exercise dissipates the Spirits and weakens. *Let his sleep* be moderate, for that refreshes the Body, revives the Spirits, and comforts all the Faculties, natural, vital and animal ; which if it be in the Night, it is so much the better. *Let his Food* be temperate, as Hens, Cocks, Capons, Turkeys Flesh, and the Flesh of Wild Foul : Roast Veal, young Mutton, boyled Eggs, Conies, Pheasants, Partridges, which are suitable to all Temperaments : of Fish, only Peaches, Roches, Whittings and Soles : all others are prohibited, as also Beef, all sorts of Pickled or Poudred Meats, Pork, Bacon, Geese Ducks, &c. all which are as bad as Poyson. *As to Bread*, let it be hard Baked, or rather Biscuit, such as is fitted for Sea, because of its drying faculty ; at least, let it be good wheaten Bread, well Baked, and of an indifferent staleness. Let him abstain from Spices, except Cinnamon, Nutmegs, Cloves and Mace ; Pepper and Ginger are said to be hurtful, so also Onions, Garlic, and such like. *Salt may be moderately used*, for Seasoning, and so it strengthens the Stomach, promotes Digestion, and prevents Putrefaction : whereas its excess, too much dries, causes great Thirst, excites Dysenteries, Scurvies, Cholick Pains, Hæticks, &c. *Vinegar is to be abstained from*, but the juyces of Oranges and Limons may supply

its place. Figgs, Dates and other dried fruits are to be allowed, but Raisins and Almonds are commended above all. Raw Sallers are disallowed; yet boyled; they may be moderately eaten. *Hot Liquors*, as Sack, Brandy, French Wines, Strong Ale and Beer, are to be avoided: but a little Sack for the Stomach sake, or in Case of Fainting may be admitted, and indeed it is the most Innocent of all Liquors; also you may let them drink at Meals, Perry, Cider, and small Metheglin, for they congest Crudities. As for the quantity of the Food, there can be no certain Measure, but it ought to be sparing; so much only, as may serve just to keep up the Spirits, for to undergoe the Cure, the sick always leaving off with an Appetite.

The Cure by Salivation.

§ 9. If the Disease shall now prove rebellious and stubborn, so that the foregoing Method does prevail nothing, you must be necessitated to come to Salivation, which by many Physicians is accounted the Ultimatum Asylum; by which, if the Sick finds no relief, or grows worse and worse, the Diseased is pronounced uncurable, or at least in a very dangerous condition and extremely Miserable.

§ 10. The way and manner of raising a flux or Salivation, is either by Exhibition of Internal Medicaments: Or by Application of Topicks; Or by Fumigation. § 11. The raising of a Salivation by the use of Internals. The Sick is first to

be purged once or twice with *Mercurius Vitaë*, or some other like thing: then in a weak moist Constitution you may exhibit these following Pills once a day, continuing them six or seven days, if need require; but if the Salivation arises at the fifth, you are to desist; in a stronger Constitution you may give them twice a day. *R Mercurius dulcis* \mathfrak{z} ij. *ad* ij. *Agarick newly Trochiscated* gr. xij. *Venice Turpentine* \mathfrak{z} ij. mix and make Pills or a Bolus for one Dose. The *Agarick* opposes malignity and evil Symptoms: the *Turpentine* attenuates the matter, and duplicates the Salivation: but every day you are to diminish the quantity of the *Mercurius dulcis* by gr. \mathfrak{j} s or gr. ij. In stronger Bodies, and a more malignant contagion, you may give a more potent Salivatory, as, *R white sweet precipitate, Antimony diaphoretick, A.* \mathfrak{z} gr. v *ad* x. *Turpentine* \mathfrak{z} ss. mix and make a Bole, to be taken from three to six times at most, according as you see the Salivation arise, but the precipitate ought to be daily diminished gr. \mathfrak{j} . in the lowest Dose: and gr. ij or iij in the highest. Another which is yet stronger, *R sweet red precipitate* \mathfrak{z} gr. iij. *ad* vi. Or *Common Turpethum Minerale* \mathfrak{z} gr. ij *ad* iv. *new Conserve of Roses* q. s. mix and make a Bole: but some give *Turbith Mineral* \mathfrak{z} gr. iv *ad* viij. *Conserve of Roses*; it is a strong thing, and ought to be given only to strong persons. Another, *R Alces, Colocynthis, Diagrydium, A.* \mathfrak{z} ij. *Turbith Mineral* \mathfrak{z} vj. *Syrup of Scabious* q. s. mix and make Pills.

Pills : Dose $\mathfrak{z}\text{i}$. Another : \mathfrak{R} Corrosive sublimate as much as you will, abstract from it once or twice Aqua Regia ; then rub it well in a Mortar with its equal quantity of crude Mercury, and sublime once : of this Mercury take \mathfrak{a} gr. vj ad xij . Silver flowers of Mercury \mathfrak{a} gr. j . ad ij . Bezoar Mineral gr. vj . Syrup of Althæa q. s. mix and make two Pills. Where Note, That Bezoar Mineral is a great defence against all Mercurial malignity, and in this case Facilitates the Salivation. But Mercurius dulcis, being well prepared is certainly the safest, and may be taken in Mithridate, Venice Treacle, or Conserve of Roses, Thus : \mathfrak{R} Mercurius dulcis $\mathfrak{z}\text{j}$. Venice Treacle $\mathfrak{z}\text{i}$. mix and make a Bole, giving it every day to the fourth day, and increasing daily the Mercurius dulcis gr. iv or v . If in some very robust Bodies, these raise not a Salivation, you must Accuate the Salivatory with red Corrosive precipitate \mathfrak{a} gr. fs . ad gr. ij . for thereby in a Dose of gr. ij . Vigo, wonderfully profligated the Pox, Plague, Cholic, and many other Maladies. $\S 12$. The Regimen during the Salivation ought to be strict, his diet moist and indifferent copious for the three first days, as porched Eggs, thick Water Gruel, strong Broths, some sorts of Fish, as Soles, Roches, Perches, Whittings ; afterwards moist and somewhat thinner, as thin Gruel, Veal Broth, and let his Drink for a Fortnight be small Posset Ale, afterwards (or before, if he Salivates well) the small or se-

cond Decoction : if you fear any dangerous Symptoms, instead of Posset Drink, it will be safer to give Milk, or Milk sweetned with Sugar of Roses, or mixt with Water. $\S 13$. The raising of a Salivation by the use of Topicks. This is done either by Unguents or Cerates: The Unguents are made of Mercury killed with Spittle or Turpentine, and then mixt with Hogs-grease, and some other Ingredients : The most famed for this purpose is Unguentum Neopolitanum, or that de E-nula cum Mercurio in a fit proportion. Some approve of this : \mathfrak{R} Spanish Mercury killed with Mans spittle ab $\mathfrak{z}\text{iii}$ ad vi . fresh Hogs Lard $\mathfrak{lb}\text{i}$. mix them well. Sometimes there is added to it Powder of White Hellebor $\mathfrak{z}\text{i}$. or powder of crude Antimony $\mathfrak{z}\text{i}$. both which promote Salivation, and oppose the malignity of the Disease. Or \mathfrak{R} Hogs and Hens grease, Beef suet, A $\mathfrak{z}\text{iv}$. Oyl of Bays $\mathfrak{z}\text{ij}$. Oyl of White Lillies $\mathfrak{z}\text{ij}$. Quick-silver killed with Spittle $\mathfrak{z}\text{v}$. mix all well together by beating them in a Mortar for the space of two hours, avoiding the fire wholly in this Work : after add Mithridate, Powders of Mastich and Antimony, A $\mathfrak{z}\text{ii}$. and mix well again : of this there need be used no more than $\mathfrak{z}\text{fs}$ or $\mathfrak{z}\text{ii}$ at most. Or, \mathfrak{R} fresh Hogs Lard $\mathfrak{lb}\text{i}$. Mans fat $\mathfrak{z}\text{iv}$. Oyl of White Lillies, Turpentine, A $\mathfrak{z}\text{ii}$. Venice Treacle, Mithridate, Benjamin and Mastich in Powder, A $\mathfrak{z}\text{fs}$. Quick-silver $\mathfrak{z}\text{vi}$. stir all together a long time in a cold Mortar till they are perfectly mixed. Or, \mathfrak{R} Hogs Lard $\mathfrak{lb}\text{i}$. Ung.

Ner-

Nervinum ℥ss. *Quick-silver* (kill'd with flowers of Sulphur) ℥ivss. mix them well in a Mortar for use : There is also *Vigo's Oyntment*, full of hot Correctives, which as they render the Sulphurous principle of the Mercury more active, Volatile, and Vigorous ; so thereby it Vibrates the Nerves, strikes upon the Animal Spirits, and impels malign Serosities into their Pores, whereby the Patient afterwards becomes Paralytick. And *Paræus lib. 19. cap. 10.* shews a Composition, made with crude sublimate, which we do not well approve of, for which cause we here omit those Compositions.

§ 14. *The way and mannner of using these Unguents is thus.* The sick being Naked before the fire is to anoint himself, (or else another whose hand is covered with a Bladder) about the Palms of his Hands, Wrists, Elbows, Shoulders, Knees, and Soles of his Feet : and if he be difficult to Salivate, all a long his Backbone, and about his Groin : the quantity of the Oyntment to be rubbed into the Body is from ℥ss ad ℥iss. or in very strong Bodies ad ℥ii. and this is to be done every Morning and Evening, and to be chafed well in, till the Sick begins to Salivate, which is commonly reiterated from four times to six or eight. The Uction being over, he is to be wrapt up in a warm sheet, and to retire to his Bed for an hour or two, and there sweat moderately : if the Patient easily Salivates, you need anoint but every Morning : if he be very weak, but once every other day : others more strong

but once in the Morning for the two first days : then for the third and fourth days Morning and Evening, afterwards but once a day, till the flux is raised. If you Salivate with Cerates, the work will be much the more slow : you may make one thus : ℞ *Emplastrum de Meliloto simplex* ℥j. *Quick-silver*, (killed with spiritie) ℥vj. Oyl of Bays enough to make it into the Body of a Cerate : spread it upon Leather, and apply it to the places where we advised to use the Oyntment.

§ 15. *The raising of a Salivation by suffumigations.* These by reason of their vehemency are accounted among the last remedies, and are only used to rustick, hard and thick Bodies, affected with a rebellious, stubborn and ill contrived Pox. The ground of the Suffiment is artificial Cinnabar, made out of Sulphur and Quicksilver, whose fumes have an attenuating, cutting, resolving, and colliquating faculty. They are thus made ; ℞ *Cinnabar* ℥j. in fine powder : *Olibanum*, *Myrrh*, *Benjamin*, *Aloes*, *A.* ℥vj. liquid *Storax* or *Turpentine* q. s. mix and make Troches weighing ℥j. or ℥ij. Or thus, as *Paræus lib. 19. cap. 14.* has taught ; ℞ *Cinabar* ℥j. *Storax* liquid & *Calamita*, *Nutmegs*, *A.* ℥iij. *Benjamin* ℥ss. mix, and with *Turpentine* q. s. make Troches weighing ℥j. Or thus ; ℞ *Cinabar* ℥j. *Benjamin*, *Myrrh*, *Storax*, *Olibanum*, *Opopanax*, *A.* ℥ss. *Mastich*, *Mace*, *Frankincense*, *A.* ℥ii. with *Turpentine*, q. s. make Troches weighing ℥j. or ℥ij. Or ℞ of the *Amalgama* made of equall parts of Lead and Quick-silver ℥ij.

An.

*Antimony, Aloes, Mastick, Cope-
ras, Benjamin, Olibanum, A.
3℥s.* with Turpentine q. s.
make Troches as aforelaid.
These Troches if they be too
weak, may be strengthened with
*Arnick or Auripigment 3j. or
3℥s.* The way and manner of
using them is thus. Let the sick
be put into *Hartmans Chair*, in
which let be placed under him
a Chafing-dish of Charcole,
wherein burn of the aforelaid
Troches from 3iij. ad 3vj. that
so the arising fume may ascend
up equally on every side: this
done, the patient must repair to
his bed for an hour or two: the
suffumigation you may repeat
from iijj. ad viij. times according
as you see the salivation to arise.
Paræus approves not of this me-
thod by reason of its danger, and
exciting evil Symptoms, yet dis-
likes not of that, which is un-
dertaken for some one part on-
ly; as to dry up *Cacoethick Ul-
cers*, which cannot be cured by
any other Means; or for to dis-
perse, or digest and dissolve,
Knots, Nodes and fixed Pains,
not otherwise removeable. If
the sick falls into a *Lypothymia*,
you must give them a Taster of
some Cordial Spirits: as, *R. Cin-
namon water 3iv. Spirit of Ange-
lica, the greater Composition 3iij.
Oyl of Cinnamon 3ij.* first mix
the Oyl with the Spirit; then
bath with the Cinnamon water:
If this prevails not, let him re-
tire to his Bed. If he falls into a
Cholical Diarrhæa, you must ab-
stain from the *Suffiment* till the
Symptom leaves him, which may
be hastned with an Anodyn and

Carminative Clyster. § 16. Now
that you may not be affrighted at
the approach of the Salivation, we
will here shew you its attendant
Symptoms. There is a swelling and
distention of the Gums, pains
under the Ears, frequent and
continual spittings and drive-
lings, Tumors of the Glandules
under the Chin swellings of the
Tongue, Lips and Cheeks; heat
in the Tongue, Pallat and
Throat, a glowing heat and dry-
ness of the Palms of the Hands,
soles of the Feet and Hypocon-
dries, extending to most part of
the Body, with a gentle Thirst;
all these arises about the second,
third, fourth or sixth day, ac-
cording to the strength and ac-
uteness of the Salivation: af-
terwards the swelling of the
Face, Tongue, and Internals of
the Mouth becomes mighty, with
an extream dolor, excoriation,
fissuration and sometimes ul-
ceration of the same, as also the
Tonsils, Glandules and inside of
the Cheeks; a continual flood
of stinking, sharp and serous
humors, sometimes thin,
and sometimes thick and fro-
thy; vehement and insatiable
thirst, continual watchings, an
intense and glowing heat of the
whole Body, pulsation of the
temporal Muscles, binding up
of the Belly; oppression and sick-
ness at Stomach and about the
Hypocondries, restlessness, es-
pecially in the Night, with an
immoderate desire of small Beer:
these Symptoms if not urgent,
signify a happy issue of the Flux-
ion, which is to be permitted
till the matter spit up leaves its
brack-

brackish taste, and becomes either tasteless or sweetish, which is commonly in 14 or 16 days; in some it lasts to the 21 day, and some Chyrurgians have continued the salivation for a whole month or 30 days with admirable good success; but it was in strong persons, and where the Disease was Inveterate and Rebellious. § 17. *If the Salivation ceases not, in time, of its own accord; Or if the sick is endangered by a Suffocation, Fever Lypothymia, or spitting blood, you ought immediately to provide against it, by stopping it, which you may do by giving every afternoon about 4 a clock a Clyster made of New Milk ℥ij. Sugar ℥ij. Salt ℥ij. with Frictions of the extreame parts: at bed-time some advise to give this, R̄ Diascordium ℥j. Guajacis ℥j. with a little Diacodium make a Bolus: but it is not always very safe. In the intervals of time comfort the sick with cooling Julebs, Emulsion, Whey, &c. But in case of a Suffocation, Lypothymia, or pain of the Stomach, give a Dose of Sal Vitrioli. In extreame pains of the mouth, often wash with milk, or Barley water, sweetned with Honey or Syrup of Roses: you must never stop a Salivation with astringent Gargarisms, lest you procure blindness, deafness, vehement pains, or other dangerous accidents. After the Salivation is finished, the sick ought to sweat well, once or twice a day, with Mercurius diaphoreticus, Bezoar minerale, Spirit, Extract, or Oyl of Guajacum, given (in a fit dose)*

in Decoction of Guajacum, to be continued from six to twelve days, purging every fifth or sixth day: Crude Cinnabar given à gr. ij. ad iij. is commended as a sudorific above all, for that it expels the reliques of the Mercury and Venereal Miasms: afterwards he is to keep to the Decoctum Sudorificum Imperici Germani, Or Guajacum diet (before described) for 30. 40. 60. &c. days, as the urgency of the Symptoms require.

The Cure of the Symptoms.

§ 18. *First, a rottenness either in the Glans or Channel of the Urethra, wherein Pustles break forth, first small and white like Millet seed; then breaking there remains a round Ulcer, having a white point in the middle: they are without pain, with a light kind of Itching, and they are cured with Unguentum Diapompholigos, or Nightshade water, in which a little Roeh Alum or Saccharum Saturni is dissolved, laid upon rags. If the Ulcer is round, without a white speck, livid, having the lips a little pust up, purple colored; you must avoid repellents, lest a Bubo be caused, and wash only with Decoction of Guajacum, mixt with Plantane water; Or with Our Aqua Ophthalmica. If the Ulcer is malignant, of diverse figures and colours, having Callos lips, creeping, &c. you ought to use digestives, and afterwards detergives; but if the putrefaction be strong, touch them with Tinctura Mercurij præstantissima,*

stantissima, once or twice a day, or apply Causticks; as a red hot Iron, having a care of the sound part, and washing daily with a Decoction of *Guajacum*, with *Scabious* and *Tormentil*. If the putrefaction be in the channels of the Yard, inject with Our *Aqua Ophthalmica*. See more in Cap. 25. Sect. 63. Cap. 26. Sect. 30. 31. aforegoing. § 19. Secondly, A Tumor of the fore-skin of the Yard. If it be recent, it admits of Discussion, by a Cataplasim made of roasted Turneps, being first anointed with Oyl of Camomil; if it breaks and Ulcerates, you ought to apply digestive Unguents and Emplasters; then cleanse, heal, and dry with Our *Aqua Ophthalmica*. If the Ulcer is Malign, you may use *Basilicon* mixt with red precipitate; Or this Collyrium of *Lanfrank*: R *white Wine* ℥ij. *Rose and Plantane Water*, A. ℥ij. *Auripigmentum* ℥ij. *Verdigrise* ℥j. *Aloes*, *Myrrh*, A. ℥ij. beat all into a fine powder and mix: Or you may apply *Aegyptiacum*, Or *Unguentum Fuscum Wurtz*ij. § 20. Thirdly, Callosity of the fore-skin, Callous Scars, Warts and Excrescencies. In all manner of Callosities, it will be good first to apply for a time Emollient and digestive Unguents and Emplasters; among which *Emplastrum de Meliloto*, and *Diapalma* are excellent things, afterwards apply *Emplastrum de Rani* with threefold Mercury. Warts and Excrescencies you may take away by washing with Lime water, or Lime water mixt with *Mercurius Dulcis*, or with

the *Liquor Septicus*, or *Aqua Phagedena*, Or as we have farther taught in Cap. 24. Sect. 18. § 1. 2. 3. 4. aforegoing. § 21. Fourthly, Caruncles, or Carnosity in the Urethra or Channels of the Yard. If at any time you see Blood flow forth, you are not to be affrighted, for it will help to shorten the Cure, because the Disease is engendred therefrom; for a part of the conjunct matter being taken away, the remainder will be the easier removed. And therefore, if such bleeding happen not of it self, it will not be amiss to procure it, by thrusting in a Catheter somewhat hard, yet with good advice, as *Paræus lib. 19. cap. 22.* has advised. If the Caruncle is inveterate and callous, you must mollify by Fomentations Unguents, Cataplasims, Emplasters, and Fumigations: A Fomentation: R roots of *Althæa* and *Lilæ* les, A. ℥v. roots of *Bryony* and *Fennel*, A. ℥ij. leaves of *Violets*, *Mallows*, *Parietary* and *Mercury*, A. Mss. *Linseed* ℥j. fat *Figgs*, N^o. xij. *Camomil* and *Melilot* flowers, A. P. j. *Water* ℥vi. boyl to the Consumption of ℥ij. strain, and apply with Spunges. A Cataplasim: R The aforegoing *Magma*, beat all well together, and then add *Hoggs-Lard*, *Unguentum Basilicon*, A. ℥ij. mix them. A Liniment: R *Unguentum Althææ & Agrippæ*, A. ℥jss. *Oleum* and *Mans* fat, A. ℥j. *fresh Butter*, Oyls of *Camomil* and *Lilys*, A. ℥vi. melt them together; add S.V. ℥j. and make a Liniment. A Plaster: It may be of *Ung. de Rani* with 3 or 4 fold Mercury: *Paræus* saith,

It exceeds all others in a mollifying faculty, and wasting Callosous hardnefs. The Fume: *It is made of equal parts of sharp Vinegar and S. V. mixt, and cast upon the Stone Pyrites or a piece of Mill-stone heat red fire hot, over which the Sick may sit, being put into a close stool: the rest of the Cure see in cap. 26. sect. 31. § 6, 7, 8 and 9. of this Book. § 22.* Fifthly, *Buboes of the Groin.* In the Cure, Bleeding and Purging must be avoided, unless it either decrease, or be at a stay. A *Diachylon Plaster* doth soften and ripen it, Or anoint with *Oleum Catellorum* and apply over *Emplastrum Hystericum* till they are soft, then open with an Incision Knife, cleanse and heal as other Ulcers: Or, When opened *Oppodeldoch* may be laid upon it: If it will not break you may use the black Oyl of *Tartar*, which is a most excellent discutient. The rest of the Cure see in *cap. 24. sect. 2. §, 5, 6, 7, 8, and 9.* where it is largely handled. § 23. Sixthly, *Falling off of the Hair.* Washes and Sweats do much good in this Case; you may wash with *Lye* wherein *Maidenhair*, *Southernwood* and the like have been boyled: then use Frictions with coarse Cloths, and Onions: after anoint with *Labdanum* dissolved in Oyl of sweet Almonds: See *cap. 24. sect. 47. § 7. 8. 9. 10. 11. 12. 13. 14. sect. 50. § 4. and sect. 51. § 6. 7. 8. and 9.* where you may have more satisfaction. § 24. Seventhly, *Intollerable pains of the Head.* Inwardly, you may give *Hartmans Diaphoretick Oyl* of

Mercury, Bezoarticum Minerale, Bezoarticum Solare, Simple and Compound, Bezoarticum Lunare, (which in this Case is an admirable thing,) *Pacipitatum Aureum, Aurum Viræ* of *Hartman, Sennertus, Grulingius, Minsicht* and *Antonius Anglus, Hercules Bo-vij, Manna Mercurij, Tinctura Mercurij, Aqua Benedicta Rulandi, Pilule Lunares*, which are thought to be a Medicine without compare: by the Nose you may exhibit proper *Errhines*: and outwardly you may Bath with the *Anodyn extract of Opium*: after anoint with *Oyl of Poppies* or *Unguentum Populeon*; and Lastly, apply over all, *Vigo's Emplastrum de Ranis* with double Mercury. § 25. Eighthly, *Nocturnal pains of the Joynts and Shins.* These are commonly removed by the general Cure, and continuing for many days the *Guajacum Decoction*: as also giving *Laudanum Paracelsi* dissolved in a proper Vehicle: Outwardly you must foment the places with things which pierce, open, and rarify: after use things *Anodyn*, as *Oleum Catellorum, Lumbricorum, of Camomil and Dill, Oyl of Juniper-berries*: if these things do nothing, you must use *Narcoticks*: and as the last remedy *Emplastrum de Ranis* with double or treble Mercury. § 26. Ninthly, *Pustles and hard Scabs upon the Head, Neck and Face.* These ought to be often washed with the Ablution of *Mercurius dulcis* in *Lime-water*, or with *Tinctura Mercurij præstantissima* (which see in *Our Doron lib. 2. cap. 7. sect. .*) after you may apply

ply *Basilicon minus*, mixt with *Mercurius dulcis*, or if they be very rebellious mixt with red precipitate; when the evil is mortified you may heal them up with a *Diapalma Emplaster*. § 27. Tenthly, *Clefsis*, *efflorescences*, *Tettars* and *Impetigo* in the Palms of the Hands and Soles of the Feet. If they be recent wash them with this Water: *Rx Rose and Parietary-water*, A. \mathfrak{z} j. *Alum-water* magistral \mathfrak{z} ij. (See it in Our Pharm. lib. 4. cap. 7. sect. 11.) *Lime-water* \mathfrak{z} iiij. *Alum* \mathfrak{z} iiij. sublimare in powder \mathfrak{z} iv. boyl them gently in B. M. Or, *Rx Oyl of Tartar* \mathfrak{z} ij. *Soap* \mathfrak{z} iv. mix and make an Unguent to anoint with; the sick using withal a weak *Guajacum Diet*. If they be Inveterate or Old, let them be softened with emollient, attenuating and inciding Decoctions, as also with Liniments, Oyntments, and Emplasters to the same effect; after perform the remaining part of the Cure with Suffumigations such as this. *Rx Cinnabar in powder* \mathfrak{z} ij. *Labdanum*, *Benjamin*, *Storax*, *Calamita*, *Olibanum*, A. \mathfrak{z} ss. with Treacle q. s. make Troches weighing \mathfrak{z} j. and use four of them at a time, letting only the parts affecting receive the smoak. If you fancy not the fume you may use this: *Rx Hogs lard* or rather sheeps suet \mathfrak{lb} i. boyl in it for an hour the root of the sharp pointed Dock \mathfrak{z} iii. being rasped: strain, and mix therewith Tar \mathfrak{lb} i. with this Morning and Night anoint them, it is an excellent thing: If you mix therewith *Oyl of Tartar per deliquium*, \mathfrak{z} ss. it will yet be stronger; and you may use it to a Tettar in any part of the

Body: Or, if that prevails not: *Rx burnt Alum in powder* \mathfrak{z} j. yolk of one Egg: fine Aloes \mathfrak{z} i. dissolved in Oxymel of squills: with juyce of Citrons q. s. make a Liniment. Or this which is most powerful: *Rx pine Rosin* \mathfrak{z} j. flowers of Sulphur, Quicksilver, A. \mathfrak{z} ss. mix all in a Mortar till the \mathfrak{z} is wholly incorporated, then add juyce of Citrons and of sharp pointed Dock, A. \mathfrak{z} ss. mix for a Liniment. § 28. Eleventhly, *Gonorrhoea Virulenta*, or a Virulent Running of the Reins. Inwardly Hartman commends Green Mercury precipitate, which may be given a gr. iij. ad viij. so also Gum of *Guajacum*: Or the Solution of Turpentine in the yolk of an Egg, and made Potable with Decoction of *Guajacum* or *Sarsa*, according to the Constitution: See cap. 31. sect. 20. § 1, 2, 3. Where we have handled the Cure more largely. Others give first for three days an Emulsion of the four greater cold seeds; then purge twice or thrice with Cassia, mixt with a little *Rhubarb* and *Cremor Tartari*; Or with this, *Rx Confectio Hamech* \mathfrak{z} vi. *Turpentine* \mathfrak{z} ii *Sarsa in powder* \mathfrak{z} j. *Mercurius dulcis* \mathfrak{z} j. mix for a Bolus: Or with this: Take Gum *Guajaci*, *Turbitib*, *Hermodactyls*, A. \mathfrak{z} v. *Sarsa* \mathfrak{z} iii. *Turpentine* washed \mathfrak{z} ss. *Mercurius dulcis* \mathfrak{z} ss. with syrup of *Fumitory* q. s. make an Electuary: Dose \mathfrak{z} j. Or with this, *Rx Turpentine* a \mathfrak{z} iiij ad vj. *Rhubarb* a \mathfrak{z} ss ad \mathfrak{z} j Gum *Guajacum* a \mathfrak{z} i ad \mathfrak{z} ss. \mathfrak{z} dulcis a \mathfrak{z} ss ad \mathfrak{z} j. mix and make a Bolus to be taken once or twice aday. After this to strengthen, you may give *Quercetans Aqua Terebinthinata*
lii 2 ad

ad ℥ii or iii. twice a day. Or this Bolus: ℞ Mummy, Alcool of Amber, Gum Guajaci, A. ℥ss. fine Bole, Terra sigillata, A. ℥is. with Syrup of dried Roses, or rather with Chio Turpentine q. s. make Pills: Dose ℥ss. Morning and Evening. § 29. Twelfthly, Scurf, Morpew, or a kind of Leprosy. These are cured by the former Oyntment of Tar, at § 26. above; or with Unguentum Enulatum cum Mercurio, Or with Lignor Mercurij Cosmeticus of Dr. Willis, or some other Mercurial preparation: Or with Aqua Viridis Hartmanni; giving inwardly during the whole time, the Diet in cap. 26. sect. 18. § 16. of this Book. If it be a Woman, and her Courses be stoppt, you must provoke them by giving a strong Blood red Tincture of Gum Guajaci made with S.V. in a draught of White Wine, four or five times before the time of their flowing. § 30. Thirteenthly, Nodes, Knobs, Hardnesses and Gummosities. To dissolve these you may apply Emplastrum de Ranis with three or four fold Mercury, Or Emplastrum de Caranna cum Mercurio; Or Dr. Harvers Emplaster against Pocky Nodes (which see in Our Doron lib. 3. cap. 6. sect. .) which is thought to transcend all others, and to dissolve the said Nodes, Tophes, Gummies or Hardnesses, and to ease all Pocky Arthritick pains as it were by a Miracle. But you may do well before you apply the Plasters to anoint the part afflicted with Hartmans Oyntment, made of Unguent. Aureum and Mercury sublimate. Others advise to anoint with Unguentum Neopoli-

tanum afterwards with this: ℞ Oyls of Turpentine of Euphorbium, of Guajacum distilled, A. ℥ii. crude Opium ℥iij. mix, and make a Liniment: Or with this, Take Mastich, Olibanum, Opium, A. ℥ij. Labdanum ℥iv. Quack-silver (killed with Venice Turpentine) ℥j. crude Antimony ℥iij. Venice Turpentine q. s. mix and make an Emplaster. Or this, ℞ Juyces of Hou-sleek, Henbane, Celandine, A. ℥j. Oyls of Lillys and Camomil, A. ℥ij. Mans fat ℥iij. boyl to the consumption of the juyces: and then add ♀ sublimate ℥iv. Venice Soap ℥ij. crude ♂ ℥iij. Mummy, Opium, A. ℥j. Labdanum, Wax, A. q. s. mix and make an Emplaster. If these things do not, you must open them by Incision, or Actual or Potential Cauteries, Take away the Flesh to the Bone, and if black or foul, scale it: afterwards keep the Sore running for some Months, then heal it according to Art. § 31. Fourteenthly, An Atrophy, or Consumption. Here you ought to forbear the Guajacum Diet; and exhibit a Diet of Sarsa and China, with other very nourishing things: give now and then, juyce of Alkermes, Confectio Alkermes Vulgar and of our prescription, in Cinnamon water, Or Spirit of Angelica. Septalius saith, That a Decoction of Sarsaparilla made with lean Veal, is an admirable thing, and truly the reason of the Medicaments bespeaks as much. § 32. Fifteenthly, Cankers and Horrible eating Ulcers all over the whole Body, chiefly in the Throat, Pallat, and Nose. These are not to be cured

red without the general Cure of the Disease be premised, and a constant drinking of a good Diet: then wash with Our *Aqua Ophthalmica* twice or thrice a day: if it prevails not you must use the *Aqua Aluminosa*, Or *Langfranks Collyrium* in § 18 above: Or the *Liquor Mercurij sublimati*; Or touch them with Oyl of *Vitriol* or *Sulphur*: Or with the *Aqua Viridis Hartmanni*: Or the *Liquor Septicus* (in Our *Doron lib. 3. cap. 1. sect 3.*) Or with the *Tinctura Mercurij Præstantissima*; just wet the Canker therewith, then apply Tents or Pledgers which have soakt in the same Liquor, and are dryed again: after, blow upon the part *Mercurius dulcis* ground Impalpable; Or this, *Rx Scammony in powder, ʒi. Hermodactyls ʒss. Gryphus Mercurius ʒiss.* mix them. Lastly, if the Ulcer be external lay over it *Empl. de ranis cum Mercurio*: Or *Basilicon minus ʒi. mixed with Quick-silver ʒiij.* § 33. Sixteenthly, *Exostosis, Nodes, Tophes, or Knots growing upon the Bones.* These have their matter from thick, tough, and viscous flegm which cannot be dissolved but by hot Medicines, which have an emollient & dissolving faculty; for which purpose besides those Medicines applyed to Scirrhus Tumours, you may apply all those things signified in § 29. aforegoing. Or this of *Paræus* described in *lib. 19. cap. 25.* of his Chyrurgery. *Rx Emplastrum filij Zachariae, ʒ Ceronei, A. ʒiij. Euphorbium ʒss. Emplastrum de Ranis ʒiij. Ceræ of Oesipus ʒi. Quick-silver killed ʒvi.* mix and make a Plaster, which spread upon Lea-

ther and apply: this will help, if the Substance of the Bones be not putrefyed and rotten: But if once they be perished all External Medicines are uted in Vain, and then you must be necessitated to lay open the Bone, either by Incision, or an actual or potential Cautery: but it is best done with an actual, for that it extracts the Virulence impacted in the Bones, and also hastens the Abscess, or falling away of the Corrupted Bone: the Cauterizing Iron may be either round, long or square, as the occasion shall require; but before the Application of the Caustick, you are first to divide the Flesh which lyes over the foul Bone, with an Incision Knife, that so the pain may be the less, and the fire come the sooner to the Bone. The rottenness of the Bone is easily known, for being laid bare, it varies from its natural white Colour, and becomes livid, yellowish or black; and it is known also by touch and searching with a Probe, when you meet with inequality and roughness; or when gently touching of it, the Probe sometimes, runs into the substance of the Bone, as into rotten wood: so also by the condition of the filth which flows forth, as being more thin, liquid, stinking, blackish, or otherwise discolored. The Cure is by scaling the Bone, which is to be done so deep, as the Corruption or Rottenness does pierce into the substance of the Bone. Now it is scaled by things which dry exceedingly, and draw forth all the humidity both Excrementitious and Alimentary; where

whereby, remaining without Blood and nourishment, and consequently Life, which is the glue that joyned the particles of things together, the Scales of necessity must fall off, as leaves which fall from a Tree. If the Corruption is only Superficiary, apply this: *R. Pulvers of fine Aloes, burnt Chalk, Pompholigos, A. ʒij. of Orrice-root, round Birchwort, Myrrh, Ceruse, A. ʒj. of Bones calcined ʒss. mix, and make them subtil; you may apply it alone: Or with Honey and a little S.V.* The following Emplaster is also commended: *R. Wax, per R. sin, Ammoniacum, Elemi, A. ʒvj. Turpentine ʒiiij. Mustich, Myrrh, A. ʒss. round Birchwort, Orrice, Aloes, Euphorbium, Opipenax, A. ʒj. Oyl of Roses q. s. make an Emplaster: Dioscorides saith also. That Euphorbium takes off the Scales of Bones in one day: and Tincture of Euphorbium in rectified S. V. doth the same: But if all these things are ineffectual to bring off the Scales, you must use Scaling Trepanns and Scrapers, the uses of which we have fully taught in cap. 15. sect. 39 and 40. cap. 21. sect. 160. cap. 26. sect. 13. § 5. 6. 7. 8. 9. 10. and 11. sect. 16. § 14 15.*

VII. Ρευατισμός. Rheumatismus, A Rheumatism or Running Gout.

§ 1. *The Cure of this Disease differs not much from the Cure of the Scurvy, and truly the same things which we advised to be used there, may equally be used here, with consideration to the Constitution: but with these*

following Observations. § 2. *First, That Purges whether Catharticks or Emeticks, be not used in the beginning. Augment nor state of the Disease (for that they set the humors on flux or running, and increase the pains;) but only in the declination; and then they are to be frequently admitted, beginning with gentle things at first, that thereby, by degrees, all the evil humours in the whole Body may be evacuated.* § 3. *Secondly, That in the beginning of the Cure, and indeed through the whole Course of the Disease, you must exhibit emollient Clysters, as Enema Emolliens Schroderi; and sometimes those which work stronger, as Enema Carminativum Mynsichti, especially if mixt with Vinum Benedictum ʒiv. and these are to be given either every day, or every other day.* § 4. *Thirdly, That inwardly, you must give Julebs, or other things, which may open obstructions of all the Vessels and conduits, mitigate the Acrimony and Motion of the humors, and correct the distemper of the Bowels: for which purpose we commend red Poppy water given ad ʒvi Morning and Evening, either alone, or mixt with Spirit of Sal Armoniac ad ʒj in every Dose, and made pleasant with Syrup of Pomgranates or Limons. And indeed Spirit of Sal Armoniac, and Volatile Salt of the same, are admirable Specificks for this purpose.* § 5. *Fourthly, That the Diet of the sick be spare, things of good juice, and easy of digestion: let him drink Barley broth, made with Liquorice and Grass roots: Or*

of the Decoction of Sorrel : Or Tincture of Roles : Or Whey simple or clarified with Plantane, Endive, Succory, and Sorrel : but they must abstain from all sorts of Wine, and other hot and strong Liquors. § 6. Fifthly, That during the encrease and state of the Disease, Laudanum may be very profitably exhibited as also other Opiales, as Syrup of Poppies, Diacodium, Nephenthe, Ptilonum Romanum, Laudanum Cydoniatum & nostrum, Confectio Anodyna, Our New London Treacle, &c. given at Night, either alone, or dissolved in Sack, and so taken; with which you may now and then (if you see need require it) mix Spirit of Sal Ammoniac agat. viij. ad xvj. § 7. Sixthly, That during the Exhibition of all these things, you are outwardly in a hot Constitution, to anoint all the places pained with Oyls of Poppy and Henbane-seeds expressed : Or with Unguentum Populeon : Or other cooling things : but in a cold Constitution with Oyl of Amber, of Juniper-berries of Rosemary and Rue distilled, which you may use either simple, or mixt with as much Oyl of Almonds : Moreover Liquor Vita Anodynus is an excellent thing to Bath with, in both Cases : after ten or twelve days anointing, you may apply over all the pained and weakned places Emplastrum de Minio, made without Wax. § 8. Seventhly, That the encrease and state of the Disease being now over, and that it is apparently in the declination, you must come to Purgation, first with gen-

tle things, as Tincture of Sena, Tincture of Agarick and Rhubarb, &c. or with this : R Sena, Tamarinds, A. ʒiv. Aniseed, Cream of Tartar, A. ʒj. juyce of Sorrel ʒij. Mynsichis purging Wine ʒij. infuse twenty four hours : strain, streeten with Manna ʒ ss. Syrup of Rses ʒj. and give it for a Dose often to be repeated. Or, R Cassia new drawn ʒvj. double Catholicon ʒiij. Rhubarb, Cremor Tartari, A. ʒj. mix and make a Bolus : if you would have it purge more effectually, you may add to the Bolus R sin of Jallap gr. viij. But if these things prove not, and the Disease seems stubborn and rebellious, you must use stronger Purgatives, as Eleazarum Diaphanicon, Diaprunum solutivum, Tinctura Cathartica Clossai & Catholica Grulingij, and such like, provided there is no Feaver. R verius lib. 16. cap 3. saith, That he always cured this Disease (when the aforesaid Medicines could not do it) with Mercurius dulcis six times sublimed, being given divers time ad ʒj. with Scammony and Refin of Jallap gr. x. and in his Observation lib. 3. obs. 22. he saith, One only Clyster of Vomiting Wine cured this Disease in a certain Gentlewoman. § 9. Eighthly, That after sufficient purging, you administer sudorificks : (for as much as that in the beginning, augment and state of the Disease they do no good, but very much harm, for thereby the Disease is doubled, and the pains encreased :) These Sweats may be made of Guaiacum, Sarsa, assifras, China,

Ec. by Decoction or Spirit : Or sweat may be procured in *Hartmans Chair* with rectified S.V. Or above all in the famous *Banian* now erected in London, by the help of which several thousands of People (extreamly miserable) have recovered their Healths. § 10. Ninthly, That after sufficient evacuations, yea and in the time of their provocations, you must exhibit things which corroborate the whole body, chiefly the Principal parts thereof, which ought to be of a cooling property, at least temperate : for as much as a too hot distemper of the Liver, often gives beginning to this Disease. For this Intention *Riverrius* prescribes these four Medicaments, viz. Tincture of Coral given ad ʒij. Conserve of the Hips of the *Eglantine* or *Rose Bryar* given ad ʒiv. *Electuarium Triasantalum* with a four fold quantity of *Rhubarb*, given ad ʒij. Tinctura R. sirum siccatum, given to ʒvj. twice or thrice a day : these may be taken every Morning fasting, on those days in which no other Medicaments, are given : But above all we commend the *Electuarium specificum Crollij*, given ad ʒi or ʒss. which is indeed a famous thing.

VIII. *Aceleus*, *Arthritis*, *Onagra*, *Chiragra*, *Gonagra*, *Podagra*, *Morbus Articularis*, The Gout.

The Cure of the Gout in the fit.

§ 1. We shall consider the Cure of this Disease as it has respect first to the Paroxysm, or affect present : secondly, to the Intermission or time

out of the fit, wherein the Prevention of its return is considered.

§ 2. In the Cure of the Paroxysm there are three several Indications : First, to stop the flux of humours to the part afflicted : secondly, to give ease or take away the pain : Thirdly, to dissolve or remove the conjoynd Cause. § 3. The first Indication requires Derivation, Revulsion, Interception and Repulsion. § 4. Derivation is performed chiefly by Cathartick Medicaments, which do in some Measure remove the antecedent Cause : this purging ought to be used in the beginning of the Disease, as soon as may be, whereby the humours now in flux, and ready to flow, will be drawn out from the Joynts and brought into the Guts ; where you are to observe, first that you are to begin with strong things ; for mild Purgers rather only stir than evacuate the noxious humor : whilst strong Purgatives force out the agitated matter, and diverts its progress to the Joynts : let the purge be fitted to the Constitution, and humour abounding in the Body, or something which may be a Specifick for this very purpose : such are *Elixir Purgans*, *Panchymagogum*, *Tinctura Cathartica Clossai*, *Tinctura Cathartica Millij*, *Catholica*, *Cholagogæ*, *Phlegmagoga*, *Melanagogæ*, & *Hydragoga Grulingij*, *Extractum Panchymagogum*, *Phlegmagogum Quercetani*, *Magistrale majus Zwelferi*, *Catholicum Sennertii*, *Panchymagogum Mynsichti*, *Polychrestum Mynsichti*, *R. sina Fallapæ*, *Vinum Purgans Mynsichti*, *Aribrivicum Schraderi*, *Antipodagricum Mynsichti*.

fichti, Syrupus de spina cervina, Rob
 ejusdem, Pulvis Diasenæ, Diatur-
 bith cum Rhabbarbo, Comitū War-
 wicensis, Hermodactylorum Compo-
 situs (which is a famous thing)
*Catharticus Universalis & specia-
 lis*, Catharticus Salæ, Catholicus
Quercetani, Purgans Scheferi, so-
 lutivus de Tribus, species Diapallap-
 pæ Mynsichti, Bened. cta Laxativa,
Caryocostinum, Diacarthamum, Dia-
 phanicon, Diaprunum solutivum, E-
 lect. de Citro solutivum, Confect. Ha-
 mech, Hiera picra simplex & cum
 Agarico, Tryphera solutiva, Elect. E-
 lescoph, Arthrit. Glossæ, Catharticum
 Regale with Hermodactis & Turbith,
 Hiera Magistralis Pacchij, Pil. A-
 garico, Aggregativa, Auræ, Cochleæ
 majores & minores, ex duobus, scæ-
 tide, de Gutta Gamandæ, Hermoda-
 ctylis, Rudij, sine quibus, Tartarea
Quercetani, Polychrestæ Quercetani,
 Arthritica Nicolai, de Euphorbio
 Mesuæ, Phlegmagogæ Quercetani,
 de Ammoniaco, de Euphorbio, de Sa-
 gapeno Quercetani, Cathol. cæ, Cepha-
 lica, Polychrestæ Hydragogæ & Rosa-
 tæ Mynsic. Arthritica Scheferi, Anti-
 podagrica Horst. Trochis. Albandal,
 &c. with any of which you ought
 always to mix a Proportionable
 quantity of Mercurius dulcis viz. à
 ℥ss ad ℥i. or ℥ss. § 5. Emetics,
 or Evacuation by Vomit is some-
 times of great use; especially if the
 Stomach be foul, or loaded, or often
 afflicted with sickness, and in per-
 sons which easily Vomit. Here &
 and things made of it bear the
 the Palm from all other Medi-
 cines, as Crocus Metallorum, Vi-
 trum Antimonij, Vinum Benedi-
 ctum, Aqua Benedicta Rutandæ,
 Sal Tartari Emeticum Mynsichti,
 Oxyaccharum Emeticum, Syrupus

*Emeticus Salæ, Regulus, Sulphur
 and Flowers of Antimony*, red pre-
 cipitate of Antimony, &c To
 these you may add Sal Vitrioli,
 & Vitæ, Hercules Bovij, Aurum Vitæ,
Turbith Minerale verum, Extr. Eme-
 ticum Mynsichti, &c. It is the opi-
 nion of famous Physicians that a
 Vomit is better than a Purge to
 root out such ill humours as lye
 below the Hip, even to the
 Foot: and it may be procured
 with gentle things given every
 Week, two days together; but
 with stronger things every fort-
 night two days together, because
 it is observable that what is gi-
 ven the second day, carries off
 the reliques of the first: River-
 rius commends a Vomit of Asa-
 rum and Broom boyled together,
 as a good Emetick in the Cure of
 the Gout. Moreover although
 Vomiting may be good, it is
 thought that gentle Vomits are
 better than strong, unless those
 stronger be given in a small
 Dose, and with great Caution,
 and afterwards Purgation be
 procured downwards, once or
 twice. § 6. After Purgation it
 will be good to procure sweat, that
 the serous matter may be dissolved by
 habit of the body; not with too hot
 sudorifics, but such as are more
 temperate, and here Sennertus
 commends Hartshorn crude or
 calcined, given alone or with
 Carduus water: Antimonium
Diaphoreticum, Decoction of Chi-
 na, Sarsa, or Sassafras, with cool-
 ing Herbs as Endive, Succory,
 Sorrels, Borrage. Forestus com-
 mends the roots of the greater
 Bur-dock, because it discusses,
 and provokes both Sweat and
 Urine

Urine, and he saith, That a certain Gouty person that kept his Bed and could not stir a Limb, by drinking the Decoction thereof in Beer very hot (after the Physicians could do him no good withal their Medicines) piss'd a great deal of white matter like Milk, and was freed from his pains. Several by taking *Bezoardicum Minerale*, *Tinctura Antimonij*, *spiritus ex tribus* or *spiritus Tartari*, have been absolutely freed: *Martin Rulandus* commends this, *R. Tops of Censory M.ii. Assarum roots ʒij. Water lbx. boyl to lbv. give the Sick ʒviii thereof hot in the Morning for several days together, and let him Sweat upon it.* *Hercules Saxonia* put many loaves hot out of the Oven round about the Sick body, and so procured Sweat. Or the Patient may Sweat in *Hartmans Chair* by help of S. V. set on fire. But sweating in the *Banian* lately erected in *London*, as it is the pleasantest and easiest way, so it transcends all other ways in effects and excellency. § 7. After these things are compleated you must come to the use of *Revolutive* means if need requires, where *Vesicatories*, (the application of a Seton if a Catarrh be present,) *Cuppings*, *Frictions*, *Issues*, and other *revulsive Operations* have been found of great use. § 8. But during all these Exhibitions: you must not forget *Intercession*, which is done first by *Internals* (after certain evacuations, and in the spaces free from Purgation) made of such things as may stop the flux of humours, (used also in the Cure of an hot Ca-

tarrh) viz. of things which cool and thicken: and sometimes there is a necessity of using of *Opiates* or *Narcotics*; because they not only wonderfully stop the flux of humours, but mightily ease the most vehement and raging pains: of these kind of Medicines new *Mithridate* and *Venice Treacle* may be often exhibited and repeated without danger à ʒss ad ʒj or more, mixed with a little *Bole Armoniac*: or instead thereof you may give Our new *London Treacle*, *Confectio Anodyna*, *Philonum Romanum*, *Diacodium*, *Syrup of Poppies*, *Liquor Viræ Anodynus*, *Laudanum Nostrum*, *Cydoniatum*, or that of *Paracelsus*: secondly by *Externals*: the Joynts above the Knees and Elbows ought to be plasted or bound up with *Interceptives* or *Defensatives*, that the humor in Motion being intercepted, may not fall, or at least not fall so forcibly upon the Joynts: for this purpose an Oyntment may be made of *Pomgranate Rinds*, *Balaustins*, roots of *Bistort* and *Tormentil*, red *Roses*, with the *White of an Egg* and *Vinegar*: which may be spread upon Clothes as broad as ones Hand, and indifferent long, and wrapt about the parts aforesaid. Or instead thereof you may apply *Unguentum Astingens* or *Comitisse*, mixt with a little *Oyl Omphacine* and the *White of an Egg*. If the fluxion be vehement use a *Liniment of fine Bole*, *Sarguis draconis*, and a little *Opium* with the *White of an Egg*, and *Oyl of Roses Omphacine*, and apply it as aforesaid. § 9. The afflux

is also to be binared by R pellers, if the pain is encreased by a sudden and too great afflux of Humours : but not by them alone, least the morion intended by nature should be stopt with danger of Life, but mixt with things Anodyn. The Liqueur of the flowers of Mullein is commended ; and Hartsborn calcined, stept and boyled in water of Mullein flowers, & applyed to the grieved part; so also Ung. Populeon mixt with Ex r. of Opium; and a fomentation of Salt of Nitrol and Sac. saturni, A. dissolved in Decoction of Mullein and S.V. Ana. which ought to be applied with Spunges.

The second Indication, viz. to ease the Pain.

§ 10. The second Indication, which requires things easing pain, is performed by Internals or Topicks. For this purpose there are commended Laudanum solid and liquid : Laudanum Londinens. & Paracelsi, Confectio Anodyna, Laudanum Nostrum & Cydoniatum, Liqueur Vitæ Anodynus, and Our Pessilential drops, Syrup of Poppies. Diacodium, Philonium Romanum, and the most excellent Laudanum Liquidum Scheferi, which may be given à gut. iv. ad x. or xij. Or, R Laudanum à gr. j. ad iv. Mysteri of Pearl, Ambergrise, A. gr. iij. Oyl of Storax Calamita gut. i. mix and make Pills for one Dose. Or, R Laudanum à gr. j. ad v. Ens Veneris, Venetian Borax, A. gr. iv. with Syrup of Poppies make Pills for one Dose. Or, R Laudanum à gr. j. ad iv. Syrup of Poppies § ii. Flowers of Sal Armoniac,

℞s. Oyl of Sassafras gut. i. Poppy and Angelica-water, A. § ii. mix them for a draught. Or, R Laudanum gr. iij. Ens Veneris ℞s. Syrup of Poppies § iij. Water of Goutivy § ij. mix for a draught. Or R Laudanum à gr. j. ad iv. Sal Prunelle ℞s. Sick § iij. mix for one Dose. Or R Liqueur Vitæ Anodynus, à gut. xvi. ad § ij. Sal Prunelle ℞s. Canary § iij. mix for one Dose to be given at Night going to Bed.

§ 11. Externals, or Topicks taking away the pain, are either Anodyns or Narcoticks. § 12. Anodyn Medicaments propounded by Authors are almost infinite, and they are very necessary in this Case, because the extremity of the pain weakens the Patient, and draws more humors to the part affected; but they are not to be used till the foregoing universal evacuations are made; lest they do more hurt than good; for either the matter which nature would thrust into the Joynts, is driven back into the inner parts of the Body, as the Stomach &c. whence grievous Symptoms arise, and sometimes Death it self; Or it is more strongly impacted in the Joynts, whereby the pain is exasperated: Or the Part is made lax and soft, whereby the fluxion is increased. Now these external Medicines do either respect the pain alone, or the Cause of the Pain, viz. the conjoynd matter; the resolution of which, will be the subject of Our third Indication, and therefore not at all to be touched here. And, because according to the different natures of mens Bodies, several things do good to several persons,

sons, we must be furnished with a great number of Medicaments, that upon all occasions we may have variety and change, since there is scarce any one remedy so effectual as equally to do good to all. *First*, Baths or Fomentations: Milk warm from the Cow is a good Anodyn. *Saccharum Sturni* dissolved in rectified S. V. eases pains wonderfully. So also *Lac Virginis*: Or Frog-spawn water distilled in May. Or this, *R Waters of Fern*, of Mullein and Frog spawn, A. ℥ss. *Lapis Tutie*, Litharge of Gold, A. ℥ij. *Vitriol calcined*, Alum, A. ℥i. infuse, and foment therewith. Or this, Take leaves of Mullein ℥vi. red Wine ℥ij. bruise the leaves, and infuse three days: then distil in B. M. Or this, Take flowers of Mullein as many as you please; fill a glass bottle therewith, stop it close and set it in the Sun, so will they yield a Liquor, which use to the part pained. Or this, Take *Vitriol white and green*, A. ℥j. *Camphir* ℥ij. White Wine, spirit of Wine, A. ℥i. mix them. Or Take *Vinegar* or *Urine* ℥iii. unslake lime ℥ss. dissolve, and take the clear Liquor. Or this of *Riverius*: Take *Quicklime* ℥iv. Rain or River water ℥xxxvij. let it stand three days: then boyl a little: and take the clear liquor, in which quench nine or ten times first red hot steel, then plates of red hot Copper: to which add *Vitriol calcin'd* to whiteness ℥x. Antimony melted in a crucible ℥ss. Litharge heated in a crucible ℥ss. White precipitate once washed and no more ℥ss. Brass burnt and powdered ℥ss. these being all quenched in the W-

ter, let it stand in a Cellar for ten days: then boyl a little, let it settle, and decant the clear. Or this of *Libavius*, supposed to be the secret of *Rulandus*: Take Fountain water a pint, Aqua Fortis ℥ss. sublimate ℥j. boyl a quarter of an hour: wet linnen cloths therein, and apply them luke-warm. Or Take *Sal Armoniack* seven times sublimed which dissolve in Wine or Water. *Solenander* sect. 4. conf. 24. saith, A Gouty old man used this, viz. A mixture of Salt, Boys Urine and Vinegar, in which he wet a linnen cloth, squeezed it, and laid it on, by which the pain was eased. *Quercetan* in his *Pharmacopœia* has these. Take *Green Elder leaves and flowers*, bruised, A. ℥bi. spirit of Wine ℥ij. digest three days, and distil in B. M. to dryness. Or, Salt Pickle, Boys Urine, A. q. s. distil, and with Linnen cloths apply the water to the place, often renewing the Cloths. Or, *R S V. rectified* ℥ij. Honey ℥i. distil in B. Vaporofo, so have you first a watery, secondly a sulphurous Liquor which keep by it self. To the Magma add Saffron ℥iss. Venice Turpentine ℥ij. Castoreum ℥vi. salt of Tartar ℥ij. salt dissolved ℥ss. Phlegm or *Vitriol* not separate from its spirit ℥iv. Lye made of Vine-tree ashes ℥ii. infuse twenty four hours; distil to dryness, and keep the Liquor by it self. To the Magma put the former water, digest and distil as before. Lastly, put all the distilled Liquors together, and in B. Vaporofo, distil once more. This *Quercetan* affirms to be a famous thing on his own knowledge, and the supposed water of *Rulandus*. A Snail Water: Take Snails (with-

our (beis) Salt, *Ebulus* seeds in fine Powder, *A. M.*i. put into a Bag, *Stratum superstratum*, for four or five times of each; hang the Bag up in a Cellar, and in a few days will drop a slimy Liquor, which smear upon the place pained. To the number of the aforegoing, we may add the *Aqua Arthritica Quercetani* and *Raici*, mentioned in Our *Pharm. lib. 5. cap. 1. sect. 1. 2. § 13.* Secondly Oyls or Balsams. *Oleum de Ranis Sennerti* is an admirable thing: So also Oyl of Calves feet thus made: Take Calves-feet, beat them and let the Bones be broken, boyl them all to a gelly: then take the Oyl or fat which swims on the top of the top of the water, and mix it with *S. V.* and Salt, and anoint therewith. Or Take *Ung. Populeon* §ij. Oyl of *Roses* §j. mix for a Liniment to anoint with. Or Take Yolks of Eggs and make a Liniment of them with Oyl of *Roses* or *Wine*: Or anoint with *Balsam* of *h* made with Oyl of *Roses* or *Violets*, it eases pain most effectually: So also *Oleum Cherinum Compositum Mayherni*, a very excellent thing, which see in Our *Doron lib. 3. cap. 2. sect.* But Oyls distilled, much exceed those made by Infusion or Decoction, which often close the Pores of the skin, hinder transpiration, and increase the heat, not piercing (by reason of their clammy substance) into the innermost part of the Joynt, to resolve the salt, sharp and tartarous humors. Among distilled Oyls the most excellent are Oyl of *Cherinum*, of *Hypericon* and yolks of Eggs, mixt, and drawn by a Retort: also *Matthiolus* his Oyl of *Scor-*

pions, drawn after the same manner which is an admirable thing. Of like nature is Oyl of *Wax*; and Oyl of *Mans* or *Beasts* bones fresh and unburned, being broken, burnt and quenched in old Oyl; then beaten and cast into a Retort, and so an Oyl drawn from them by the force of Fire: Or this; *R Mastich*, *Frankincense*, *Myrrh*, *Ammoniacum*, *Opopanax*, *Bdellium*, *Mummy*, *A. §ij.* *Vitriol* *℥ij.* *Honey* *℥ij.* *Tartar* *℥j* *ss.* *S. V.* *℥iiij.* mix and distill therefrom an Oyl, with which Anoint. To these add *Balsamum Philosophorum*, *Catholicus Steenbergij*, *Polychrestus Mynsichti*, *Nervinum Scroders*, *Saponis Simplex*, *Saponis Clossæi*, *Arthriticus Scroders*, *Paralyticum Clossæi*, *Antipodagricum* & *Podagricum Horstij*, *Balsamum Sacrum*, *Balsamum Terebintinae Simplex*, of *Sulphur*, &c. § 14. Thirdly, *Cataplasms* or *Pultises*. *R Milk* *℥j.* with *Crumbs* of *white-bread*, yolks of Eggs and a little *Saffron*, make a *Cataplasm*, and apply it. Or this, *R Vinegar*, *Water* or *Milk*, and with *Henbane* leaves bruised make a *Cataplasm*. Or this; *R Milk* *℥j.* pulp of *Althæa* roots, *q. s.* make a *Cataplasm*. Or, *R Pulp* of *Cassia* *℥j.* *White bread* boyled in *Milk* *℥ij.* powder of *Orrice* *℥iiij.* *Oyl of Roses* *℥j.* mix them. Or, *R Juniper-berries* well bruised, *℥ls.* *Myrrh*, *Bay-berries* in powder, *A. §iiij.* with *Oyl of Roses* make a *pultice*. Or, *R Wheat Meal* *℥j.* *Salt* *℥j.* *Soap* *q. s.* mix for a *Cataplasm*. Or, *R Milk* *℥ij.* *crums* of *White bread*, pulp of *Cassia*, *A. §iiij.* *Barley* and *Oaten Meal*, *A. §ij.* *Vitriol calcined* *℥j.*
Ve-

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Venice Treacle ℥ss. boyl to a due thickness. Or, ℞ *Bean-Meal* ℔ss. *Wine* ℔ij. *S. V. Butter*, *A.* ℥iii ss. boyl to a Cataplasim. Or, ℞ *Juyce of Tobacco* ℥iij. *Wax* ℥ij. *Butter* ℥iss. meal of *Althæa roots*, q. s. mix. Or, ℞ *red Roses* Mj. *Camomil Flowers* Pj. *Barley and Fœnugreek meal* *A.* ℥j. *yellow Sanders* ℥ss. *Oyl of Roses* q. s. boyl and beat, then add yolks of Eggs N^o. ij. *Vinegar* ℥iiij. Or, ℞ *Whites of Eggs* N^o. ij. *Salt in fine powder* ℥iij. *Vinegar of Roses* ℥j. *powder of Hermodactis*, q. s. mix, and apply it with *Tow*. Or, ℞ *crums of white bread*, boyl in *Milk* to a due thickness, to which add *Mucilage of Aithæa seed* ℥ij. meal of *Lime and Fœnugreek-seed*, *A.* ℥ss. *powder of Camomil and Melilot flowers*, *A.* ℥j. *Saffron* ℥j. *Oyl of Roses* q. s. mix them. Or, ℞ *Barley meal* ℥iiij. *Water and Vinegar*, *A.* q. s. boyl to a thickness and add yolks of Eggs N^o. ij. *Saffron* ℥j. Or, ℞ *Water of white Mullein and of Fern roots*, *A.* ℔ss calcined *Vitriol finely powdered* ℥jss. *Wheat or Barley Meal* ℥iiij. *Saffron* ℥ij, make a Cataplasim. Or, *Make a Pultice of the leaves of Elder or Ebulus*, by beating them in to a Mass, or by frying them with *Butter* in a *Frying Pan*. Or, ℞ *Aron roots and Cow-dung*, beat them together. Or, ℞ *roots and leaves of Mallows* bruise them, and boyl in *Wine and Vinegar*, *A.* q. s. till a third is consumed; then with *Rye. Bran and Meal* q. s. make a Cataplasim, which apply as hot as can be endured; *Solenander* does mightily commend it. Or, ℞ *Brony-roots and with Aqua Vitæ, or Spirit of Wine*,

beat it into a Cataplasim. Or, ℞ *Barley and bean Meal*, *A.* Mj. *Roses and Camomil Flowers*, *A.* Mj. *waters of Mullein and Plantane, and Wine*, *A.* q. s. mix them. Or, ℞ *powder of red Roses* ij. *Mastick* ℥j. *Campbur* ℥ss *Barley meal* ℔ss. boyl all in *White wine*, stirring it continually to a due thickness, then lay it on warm; *Solenander* saith, it resolves, eases the pain, and strenghtens the Joynts. Or, ℞ *Camomil Flowers* ℥ij. *red Roses* ℥j ss. *Mullein Flowers* ℥j. *powder*, and boyl in *Milk* to a Pultise. Or, this of *Foresius*. Take *Ducks meat*, *Camomil Flowers*, *A.* q. s. boyl in *Milk*, and with *Barly meal* make a Cataplasim. He saith it will do miracles. Or this, Take *Hemlock leaves* ℔ss. *Soot* ℥iiij. *Salt* ℥ij. *whites of Eggs* N^o. ij. beat them together and apply it. Or this of *Montagnana*, which he saith is admirable in the most extreame pains; Take *Yolks of Eggs* N^o. x. beat them in a *Frying Pan* with *Oyl of Roses* ℔ss. let them boyl gently, till they grow thick, adding *Saffron* ℥ij. then lay it on hot. Or, Take *Mushrooms of the Oak*, beat them into a Cataplasim with *Yolks of Eggs*. Or, Take *Lixivium of Tartar*, season it with *Salt*, and *powder of Bezoar Stone*, or *Harts-horn prepared*, mix with *Honey of Roses and Vinegar*, by a gentle beat, and lay it on by way of Cataplasim. § 15. The easing of the Pain, by the use of Narcoticks. Many Physicians oppose the use of Narcoticks and stupefying Medicines, pretending there are other helps more safe to take off the vehemency of Pain, and in their Opinion think it bet-

ter not to ease the pain at all, than to do them mischief by these kind of Medicines; but we (with that great man *Dr. Maybern*) take this to be only a plausible *Salvo*, for such an objection; 'tis truth (saith he) *Narcoticks* taken inwardly if they be not aptly and carefully used, are not without great Danger, because unreasonably given, they cause a kind of congelation in the Brain, and introduces upon the Spirits an *ἀσυντοία* or stolidity and fixation, not by reason of refrigeration, but by a fixing quality, which is the issue of the Luxurient Sulphur, contained in these Medicines, from whence there is induced an Imobility upon the Animal Spirits, hindring their influx, and from thence follows Death by Suffocation: but where there is extream pain, nothing of this need be feared; for 'tis certain, that one day of Extream pain, doth inflict more weakness upon the Nerves than the application of Topical Medicines (although *Narcoticks*) can procure in a week. But suppose that by these means some sort of Stupor or Numbness should remain upon the parts, there are thousands of Remedies, able and powerful enough to remove and wash off that fault, as *Baths*, *Fomentations*, *Unguents*, *Balsams*, *Emplasters*, *Sweatings*, and such like, which performs this in a short time. However, *Narcoticks* outwardly applied, being corrected with their proper Antidotes, are harmless and inoffensive. Almost all Authors make use of

Henbane, in vehement pains of the Gout; and some assent to the use of *Opium*; if the Spleen be grown very hard, we apply *Hemlock* to it, without the least danger, which is also very usefully laid upon the Eyes, although they are so near the Brain; I for my part do not fear a happy success, (having always approved of it,) to make use of both these plants in form of a Cataplasm, joyning to them, *Cassia*, *Camphir*, *Saffron*, *Sperma Cæti*, and *Mans Fat*, which is a most excellent Anodyn in this case. *Camphir* is of excellent use in easing of Pain, for it opens, penetrates, attenuates, digests, and promotes insensible transpiration, upon the account of its subtil particles, it is usefully applied in the most intense and extream pains. *Opium* also dissolved, digested, and afterwards distilled, and applied with proper mixtures, is of much advantage to the joynts, even in the extreamest height of pain, the efficacy of which is advanced by the addition of *Camphir*; In this particular these recited helps are sufficient; altho others no less generous may be produced and prescribed: as, Take *Henbane leaves* Mij. *Nightshade*, *Housteek*. A. Mj. *Garden Poppy-heads*, Pj. *Mandrake-roots* ℥j. *flowers of Camomil* and *Violets*, A. Pj. make a Decoction in water or milk, with which Bath the part. To the Migma, after the Liquor is strained out, add *Meat of Linseed and Wheat*, A ℥ij. Oyl of *Camomil* ℥ij. mix and make a Cataplasm. Or, Take *green Tobacco leaves*, *Henbane leaves*

leaves, Ana, beat and apply them to the part pained. Or, Take Elder and Fumitory-water, A. ℥iij. Treacle-water ℥j. Opium ʒls. mix and make an Epithem. Or, Take S. V. made yellow by infusion of Saffron ℥iij. Camphir ʒj. boyl a lictle, and dissolve therein Opium ʒj. with which bath the part; it is a safe and most effectual Medicine. Or, Take Unguentum Populneum ʒij. Extract of Opium (dissolved in S. V. or vinegar) ʒij. mix and anoint therewith. Or Bath the part with Liqueur Viæ Anodynus, Or Extractum Opj Anodynum. Or, Take Henbane roots ℔ij. Hemlock-leaves ℔j. Nightshade, Housleech, A. ℔ls. Opium ʒls. dissolved in Vinegar, and evaporated to the thickness of Honey; Camphir ʒij. dissolved in Oyl of Amber or Juniper-berries: beat all to the form of a Cataplasm and apply it. If also you add to it Flowers of Sal Armoniack, Vitriol calcined to whiteness, A ʒss. Flos or Lac Sulphuris ʒi ss. or ʒij. it may be so much the powerful. In the use of all the aforesaid Medicaments, both Anodyn and Narcotick, we are to apply such things as we do find to help the sick, which is known by a continual changing of them, till the patient has ease: for the natures and constitutions of Men being diverse, so the same Disease does not only differently afflict, but also requires various and different remedies; inso-much, that it often comes to pass in curing of the Gout, that that which may profit, ease or cure one man, may do another no good at all. For this cause

fake therefore it is, that we ought to be provided with a great abundance of Medicines, that when one has been applyed in vain, another may be made use of, continually changing, till something effectually is found; but always making choise of such as Art and Reason shall principally investigate.

The third Indication, viz. To dissolve the conjoynd Cause.

§ 16. The matter contained in the part, is to be removed either by derivation, discussion, or cautery. § 17. Among things which derive the Humor from the part affected are Horsesleeches, a sufficient evacuation having gon before; for then they do much good; especially when the Veins in the part affected, do seem to be distended or swell. But in a very old and settled pain especially, or from a cold Cause, some advise to apply Vessicatories to the place affected; and Riverius saith, that Varandeus did with happy success use the common Shop Vescatory Plaster by it self without any mixture, by which he cured a great and rebellious swelling upon the Knee, when other Physicians had in vain used many Purgations, Sudorifick Diets and External Medicines. § 18. For Discussions most of those things, whether Fomentations, Oyls or Cataplasms, designed for easing of the Pain, may be here accepted; for asmuch as pain is scarcely to be removed unless some part of the Cause be removed also: however these things following are of

of known and approved use. *Emplastrum de Cerussa cum Camphora*: Take Wine ℥iiss. Oyl ℥ij. mix and boyl till half the Wine be consumed; then add Ceruse finely poudred ℥ij. Camphir ℥ij. boyl to the thickness of a Plaster: if there is great inflammation, take vinegar instead of wine, spread it upon Linnen Cloth and apply it. Some use *Emplastrum Diacalciteos*, which I have known to be of singular advantage; especially if a little Opium and Camphir be added: but the place ought first to be anointed with Sennertus his Oyl of Frogs. And we commend upon Our own Experience a Cataplasim made of Camfry-roots, being well beaten, spread upon Leather and applyed, changing it once a Week; there is no greater nor better Remedy, both to ease the pain, and dissolve the conjoynd cause. *Emplastrum de Thure*. R *Frankincense*, Mummy, Colophony, A. ℥j. Mastich, Myrrh, white Coral, A. ℥ss. Mans Fat ℥vj. *Ammoniacum*, Bdellium, (dissolved in Vinegar.) A. ℥iij. Turpentine ℥ss. Oyl of Foxes and Roses, A. q.s. make a Plaster. Also *Emplastrum de Cicuta cum Ammoniaco*, *Hermodactylorum*, de Sandyce, Sanctum ab Andrea à Cruce, de Galbano, & Galbano Crocatum Mynsichti, *Diasulphuris Rulandi*. ad Tophos Schroderi, *Gummosum Paracelsi*, *Diaphoreticum* & *Emolliens Mynsichti*, *Scirrhusum*, *Arthriticum Maxi*, ad Tophos Augustanum, de Pice Mynsichti, de minio Simplex; These are all of Eminent and Approved Effects. Or, R Orrise roots, Her-

modacts poudred, A. ℥vj. *Emplastrum Oxycroceum* & de *Mucilagibus*, A. ℥ij. Pine Rosin ℥j. melt them together and add Oyl of Earthworms, q.s. make a Plaster. Or, R *Emplastrum Diacalciteos* ℥iiss. *Diasulphuris*, Oyl of Hypericon and Earthworms, A. ℥j. Storax, Benjamin, A. ℥ss. *Taccamahacca*, Liquid Storax, A. ℥ij. Wax, q.s. mix and make a Cerat, in which dip Cloths twice or thrice. Gum Caranna dissolved in S. V. and Taccamahacca are of singular Use and Virtue. *Emplaster of Betony with Mastich, Storax and Benjamin*, dissolved in S. V. are very good. *Balsam of Ebulus made with Earthworms*, sucking Puppies and a little Salt is thought to be most Excellent. Galen exceedingly commends a Plaster made of Old strong Cheese, with the strong Broth of a poudred Sows Legg. Others boyl poudred Hogs Leggs till they come to a Jelly, and then mix therewith Old Cheese p. ij. powder of Water-cresses, p. j. and so make a Plaster, which is said to dissolve very hard Knobs. Gum *Ammoniacum* dissolved in Vinegar does powerfully soften; so also *Emplastrum Diasulphuris*, the part being first anointed morning, noon and night with Balsam of Sulphur. Forestus his Cerat of *Ammoniacum* is highly approved of; so also *Emplastrum de Ranis cum Mercurio*; as also this, R Juice of Tobacco ℥iij. Wax ℥ij. Line-tree Rosin ℥iiss. Turpentine ℥j. Oyl of Camomil, q.s. make a soft Cerat. Baths and Fomentations made with Neurotick Herbs, viz. such as strengthen the
K k k Nerves

Nerves and Brain, boyled in a Lye of Steele Water and Red Wine, with Salt, Sulphur and Alum, do wonderfully corroborate; And the *Lac Aluminis Mayherni*, (made as in Our *Dorron*, Lib. 3. Cap. 1. Sect. .) is singularly good. *Lixiviums* or Lyes made of the Ashes of Coleworts, Vine Branches, Pot-Ashes, Tartar, and the like. *Alcalisate Salts*, have a powerful Discussive and Anodyne virtue, chiefly if mixed with *Vitriolin* substances. *White Vitriol*, dissolved in water of Coleworts; also Salt of Lead, and Lead (by their native sweetness) are exceeding Anodyne and Discussive, being outwardly applyed with the said Colewort water: so also Fern, in whose Ashes is latent a Salt of excellent Vertue. To these things add the Oyntment of *Castoreum*; the water in which Brass and Iron are quenched, and afterwards *Mercurius Vitæ* is steeped: and the Decoction of Needles, made with Wheat-Bran, Salt, Wine and Water. All *Lixiviums* open the Pores, and so draw forth the matter, whilst it is yet in a liquid form. § 19. *Causticks* are to be used when the Gout becomes stoney and knotty, which is when the Disease has been old or of long standing, in which case, by all the former medicines only a mitigation of the pain is to be hoped; but the stoney substances (unless very new) will hardly ever give way. And indeed they do but make themselves ridiculous, who undertake to dissolve the Knots of the Gout; for if they be but once thoroughly hardned, the attempt

is but like washing the Blackmore white. *Whilst the matter is yet viscous and slimy, the thing is altogether impossible*, if we can attain a Medicament which will enter into it, and does agree with the matter in similitude of substance, and such an one is *Sal Armoniac*, both that which is Natural, and that which is Artificial, compounded of Soot and Urine. But the *Volatile Salt* of Urine, made pure by many Sublimations, exceeds it in efficacy. The Pores of the part being opened sufficiently, either by a Barb, or a Hot House, or a *Lixivium* of the *Scoria* or dross of *Antimony* (whose Sulphur is a great discutient) let there be taken Salt of Urine, which dissolve in S. V. rectified, with which Foment the Joynts. Oil of *Arsenick* doth digest this slimy matter, and draw it to the superficies of the skin, neither is there any Medicine can equal it upon this account, if a little of it be mixed with May-Butter, or some other Fat, and the joynts be lightly anointed with it; it sometimes discusses these Tumors, and causeth a certain viscous matter to sweat forth at the Pores, which looks like Fat; and sometimes there will arise Pustles which pour forth drops of water: But in using this Remedy, you must not make too much hast, but attend hereupon for 15 or 16 days. But when the *Tartarous matter* is once become stony, you must with a gentle *Caustick* open the skin; and then the Stones are to be taken away either with Instrument, or with a drawing Pla-

ster of Gums; or with this following, which sometimes breaks the skin of it self, eases the pain, and afterwards draws the stony and Tartarous matter out of the Joynts: *Re Roman Virriol ℥ij. Roch Alum ℥ss. Salt ℥iiij. calcine all in a Crucible; letting it evaporate so long, till the Spirits begin to ascend, which you may perceive by the smell; then cease, cool, and powder: Take of this Powder, Barley-Meal, Ana: mix with Wine Lees to the form of a Pulvis, which spread upon a Rag, as thick as a Crown peice, and apply it to the place affected. When it is dried, dissolve it again with Wine Lees, and apply it again: this do till the pain is gone, and afterwards till all the Tartarous and Stony matter is consumed and taken from the Joynt.*

The Cure of the Gout in the Intermission, Or prevention of its return.

§ 20. Now because this Disease is wont to return by fits, especially bring and fall, we shall here shew the way to prevent the same; wherein are three principal Intentions: First, to hinder the gathering together or breeding of any Gouty matter; which is done by a fit diet, and proper Arthritick Antidotes. Secondly, To take away the Gouty matter, if any be collected, which is done by things which Evacuate, as Emetics, Catharticks and Sudorificks. Thirdly, To strengthen the Joynts, that they may not be so readily disposed to receive a flux of Gouty humours, which is done by Topick Corroboratives.

21. The first Intention; which

requires a good Diet. This respects not to much the quality of the things eaten, as the manner and measure. The sick ought perpetually to have change of Diet, what his Stomach longs for and can easily digest: the constant eating of the best things, and food most opposite to the Disease, may be of the worst consequence, and nourish what you seek to destroy; for the constant use of any thing may beget a habit; and if the Stomach once loath the thing so taken, through weakness, created by a constant receiving of one and the same thing; Or from some other cause, this weakness makes crudity and indigestion; whereby the Chylus not being elaborated as it ought to be, ill humors, and from thence an evil habit of Body is produced, and indeed the morbidick matter of the Gout. Whereas change of Diet, as it causes a delectation to the Stomach; so that delectation recreates and strengthens it; and from a strong stomach proceeds a good concoction and digestion, and a well elaborated Chyle, and from thence a good habit of Body, by which all its faculties and functions are so strengthened and established that they all perform their duties as nature requires, whereby those Morbidick feculencies, which otherwise would reside, or be insinuated into the Mass of Blood, or precipitated upon any principal part or parts, are as they ought to be evacuated and carried off: However by such a various and uncertain diet no evil habit can be created; although sometimes evil things be taken; for first, nothing but a constant use of the same thing can create an evil habit; it is not the

once or twice eating of a thing does do that but a constant adhering to the same : secondly, as a various diet strengthens the Stomach, so a strong Stomach, if it meets with things not altogether so proper, (yea although they be something Heterogeneous to it) it so much the more easily masters and overcomes them, and converts their juices to a good use which a weak Stomach would turn to an evil one : If therefore by the constant use of a changeable diet, any habit be created, it must be a good one, and what is opposite to the morbid cause and matter of all Diseases, and therefore of the Gout. The manner of the preparing of the Diet, ought to be in that way which the Stomach best like : and the Food ought to be eaten rather hot than cold. The measure of the Food received, ought to be according to the Capacity of the Patient, the which although we can no ways prescribe or limit ; yet this in all persons may be a general rule, that they rise from eating rather with a yet Craving Appetite, than with a Stomach gorged, cloyed, or indeed fully satisfied : and afterwards to eat only when pure hunger enforces. By this means as a healthful habit will be produced, so may the Food be eaten in due season, for strength, and not for Gluttony and Drunkenness. He may drink of all Liquors moderately, as of Beer, Ale, Cider, Perry, Mead, Wines made of juices of Fruits, as Cherries, Goose-berries, Rasp-berries, Spanish and Rhenish Wines, Alicant ; which may be taken very moderately either alone or

mixt with Water. *Hollerius* commends instead of Wine a thin *Metheglin*, having Water ℥xlviii to Honey ℔i . but as this suits not so well with Cholerick people, so you may instead of Honey ℔j . take Sugar ℔iv . and so work it up with Yest, and a little Salt of Tartar. § 22. But to perform this first Intention perfectly, you must exhibit certain *Arthritic Antidotes*. Among these the chief are Gout-Ivy, or Ground-Pine, Germander, Ground-Ivy, round Birthwort, true Pontick Rhubarb, Sarsaparilla, Scordium, &c. The juice or Essence of Ground Pine, or Gout-Ivy, taken for forty days together is an admirable thing : so also the *Pilule Arthritice Mayherni* (which see in Our *Doron lib. 2. cap. 23. sect. .*) The Essence of Alehoof or Ground-Ivy, as also Germander and Scordium, do the same, which you may make up into Pills in like manner. *Obsorbents* are indowed with a manifest quality and power of drying, to which if specifics be added, their effects will be the more sensible, lasting, and noble : this faculty is in all sorts of Bones, whether they are calcined or not : but *Humane Bones* of the same kind with those parts which are afflicted, are more efficacious by reason of their similitude. *Pulvis Arthriticus Mayherni* : ℞ of the aforesaid Bones ℥iij . crude Hartshorn, calcined Hartshorn, A. ℥ij . Crabs-Eyes prepared ℥i . Powder of mealy Sarsa ℥iv . make an Impalpable Powder : to which you may add if you so please Seeds of Anise, Fennel, Coriander, Cinnamon, Am.

Amber, A. ℥ss. Musk gr. iij. Dose Morning and Evening a whole Spoonful. This is also to be noted that *Alcalescens Salts* do dulcify the most Corrosive and Pungent Spirits, among which Salt of Tartar is the most powerful: it may be taken in Broth or else in Conserve of Betony, Germander, Ground-Pine, Ground-Ivy, or Succory: it is greatly beneficial to those that have the Gout, not only because it tempers the salt and sharp matter; but because it also brings forth the Salt and Tartarous substance (the cause of this Disease) by Urine. The Salts of Gout-Ivy, Betony, Wormwood, Ground-Ivy, Dwarf-Elder, &c. produce the same effect. *Saccharum Saturni*, is of like nature, but this too much use of it may hurt the Instruments of Generation. *Roverius* prescribes this Diet, which he says may suit all Constitutions: ℞ *Sarsa* ℥ij. *Liquorice* ℥j. *Cinnamon*, *Aniseeds*, A. ℥ss. make all into a fine Powder: of this take one Spoonful, which mix with so much fresh small Beer, or Ale, as the Patient may drink at a Meal: brew them well together, let them stand for a quarter of an hour, then strain and drink the Liquor, doing the like every Meal: but if they can drink the Powder also with the drink it will be so much the more effectual. § 23. The second Intention which requires an Evacuation of the collected matter if any be. It is done by proper Emericks, Catharticks, and Sudorificks, plenty of which you may find § 4. 5. 6. of this Section and

therefore need not be here again repeated: yet these things are observable; First, That Vomiting may be procured once a Month for two days together, especially with the Decoction of *Asarum* and *Broom*, or with Infusion of *Crocus Metallorum*: Or *Sal Vitrioli*. Secondly, That Catharticks may be used either Spring and Fall; or four times a year: or once a month according to the Strength and Constitution, *Pulvis Arthritis*, and *Caryocostinum* are singular here, but the latter may do harm if given to hot and dry Bodys, but may be of good use for such as are cold and moist: but these things are much more effectual if each Dose be mixt with *Mercurius dulcis* ℥j. for the Power and Energy of Mercury here truly exceeds all other things, as we by experience have often found. Thirdly, That Sudorificks be used after the aforesaid universal Purgations. *Solenander* saith, That many who drink the Decoction of *Germander* sixty days together were cured: we can say the same thing Experimentally of *Scordium*; you may make it thus: ℞ *Germander* or *Scordium* in flowering M. j. *Rhenish Wine*, Sack, Water, A. ℔j. boyl in a double Vessel three hours: strain, give half a pint, and compose the sick to sweat. But if a Serous humour flowing from the Brain be the cause of this Disease, as it often is, you must respect the Brain, correct its distemper, and see that the humors bred therein be derived and discussed: for which purpose Issues, Vescicatories, Er-

rhines, Sternutatories, Masticatories, Cephalick Ponders and Plasters, spiced Caps, &c. are of necessary use. § 24. *The third and last Intention is to strengthen the joints with Corroboratives.* But that this may be done effectually, you must always evacuate the Antecedent cause before hand, otherwise you will act in Vain. Here things binding, strengthening and repercussive are good: you may Bathe with a Lye made of Beech-ashes, well strained or filtered, and then mixed with its equal quantity of Wine, and two ounces of Alum in Powder. *Hollerius* commends the pressings of Grapes in these words: *If the pressing of Grapes be brought into a Barn, from the Wine press, and being covered with Blankets does there grow hot, in them let the sick put his Feet, Legs, Thighs, Arms, or his whole Body; I have tried it (saith he) an hundred times, there is no better thing under the cope of Heaven.* *Solenander* sect. 4. conf. 21. expresses it also with as high Commendations: *The same thing has been proved of Bremers Grains, going into them whilst they are hot. The hot Baths at Bath are famous for this very purpose:*

for they ease pain, provoke Sweat, discuss the Gouty matter, and strengthen the part afflicted. Where Natural Baths cannot be had, you must form Artificial ones in Imitation thereof; as a Decoction of Cephalick Herbs with Astringents, as Sumach-berries, Myrtils, Baulastians, Pomegranarinds, Cypress-nuts, Alum, Salt, Sulphur, Vitriol and Niter, made with Smiths Water and Red Wine: after bathing anoint with Unguentum astringens, or Comitisse; then apply Emplastrum Diapalma, for it is excellent in all Gouts, what humour soever offends: and *Solenander* sect. 4. conf. 25. saith, That some who used often to be troubled with the Gout, by the continual use of the said Diapalma (with frequent purges at certain times) were freed from the Gout pains for five years together: It neither daubs, nor fousls, nor raises any Itch or Pimples, or is otherwise troublesome. But that which transcends all is a Cataplasm of Comfrey-roots, spread upon Leather and applied, it eases the pain, takes away the swelling, and so strengthens the part, that the Disease never returns any more.

CHAP. XXXIII.

OF FEVERS.

F *ῥίπτιος πυρετός, Febris Diaria, or One day Fever.*

§ 1. *The causes of a Fever as they are assigned both by the Anci-*

ents, as Galen; and Neotericks, as Sylvius de le Boe, and others; we have already declared lib. I. cap. 56.

§ 6. *sec. 1.* § 1. 2. 3. 4. 5. &c. together with their kinds and differences. But as what is there said is little of satisfaction to us, save shewing of other mens opinion: so we shall here offer some new Considerations, to be either approved or disapproved of, according to the probability of the Argument assumed. Or reasons enforcing the same. § 2. *The Distinction of a Fever we shall here overpass, that we may the more speedily consider the Cause, which, as we conceive, is the contest of a Volatile or Fixed Salt with an Acid Salt,* from whence arises an Effervescence and an Irregular and Unnatural heat, which is dispersed over the whole Body either by the Circulation of the Blood and Pancreatick juyce: Or Contiguoufness of the particles of the whole humane frame. § 3. *Now as a Fever is an Effervescency of Blood over-heated, raised by a contest in the Heart, from the different mixtion of the said Salts: so the differences are manifold, viz.* 1. A Volatile mixed with an Acid. 2. A Fixed with an Acid. 3. A Volatile and fixed with an Acid. And so accordingly a Fever is either Non-putrid, Putrid, Or Malign. § 4. *A Non-putrid Fever proceeds from the different mixtion, of a Volatile Salt with an Acid; which if the Volatile exceeds the Acid, it produces an Ephemera, Diaria, or one day Fever: But if the Acid exceeds the Volatile, it produces a Synochus non Putrida, Synocha simplex, Or a Diaria of more days than one: if the Salts be equal, the Fever lasts sometimes four, six or seven days, and then endangers a*

putrid Fever. § 5. *A Putrid Fever proceeds from the different or equal mixtion of an Acid and a Fixed Salt; wherein, if the Acid exceeds the fixed, it is either Synochus putrida (wherein there is not the least remission of the fit;) or a continual Quotidian, Tertian or Quartan, (wherein there is some small remission;) and these severally arise according to the degrees by which the Acid exceeds the Fixed. § 6. But if the fixed Salt exceeds the acid, the Disease is an Intermitting Fever, and is threefold, viz. A Quotidian, Tertian, or Quartan Ague, all which severally arise according to the degrees by which the fixed Salt exceeds the acid. § 7. And if the Power of the Salts be equal on both sides, as the Acid would create a continual Fever, and the fixed an Intermitting: so a compound Quotidian, Tertian, and Quartan Ague is produced: almost continual, by reason of the iterating of the Fits; and yet intermitting, by reason of a certain (though small) space of time between each Paroxysm. § 8: *A malignant Fever proceeds from the different or equal mixtion of an Acid Salt with a Volatile and Fixed: wherein if the Acid exceeds the Volatile and Fixed, there is produced a Hætick Fever, Marasmus, and Marasmus; all which arise, according to the degrees by which the Acid Salt exceeds the fixed and Volatile. § 9. But if the Volatile and Fixed Salts, exceed the Acid, then is Stirred up the Measles, Small Pox; Purple Fever, Calenture or Sweating-sickness, all which arise according**

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to the degrees by which the said Volatile and fixed Salts exceed the Acid ; and also according to the nature, quality, and quantity of the humors abounding. § 10. *But if the powers of the Salts be equal, then is the Contest, equal, sharp, and doubtful, and from thence arises a Pestilential Fever, which is the Plague it self.* § 11. *These things are all demonstrable to the External senses by the help of the spagyrick Art, and a due or skilful mixture of proper Salts : as also the reasons of the return of the Paroxysms of Intermitting Agues : all which we would willingly have done here, but we Consider, we Write only a Synopsis of Medicine. But however, from what has been already said : it will not be difficult to investigate a new Theory for the Cure of all sorts of Feavers, arising from what cause or causes soever.* § 12. *The Cure of a Fever in general is by suppression, or qualifying of the Luxuriant Salt : In special by mitigation of the Symptoms, which are chiefly first, thirst, the Inner Coat of the Stomach being either parched with a burning heat, or soaked with a hot, sharp and nitrous humour. Secondly, Hiccuping, from sharp and biting humours, twitching and nipping the Stomach. Thirdly, Vomiting, from a hot and cholerick humour : Or a cold pituitous, and viscous humour : Or from fuliginous Vapours arising from the contest of the Salts. Fourthly, Loosness, from the so great irritation or weakness of the Stomach, that it cannot retain and digest the*

Meal : or plenty of cold or loosning Liquors drunk down. Fifthly, dryness, roughness and blackness of the Tongue, from the heat and sooty Vapours, which so burn the same that the Spittle is consumed. Sixthly, Leptothymia or Swooning, from the pernicious effervescency of the ferment : or fermentation of green or black Choller, breathing out of the Veins into the Heart. Seventhly, shortness of Breath, from Inflammation of the Heart or Lungs, through the Combustion of the Salts ; or a fermentation raised in the Veins, rushing violently on, seizing on those parts. Eighthly, Head-ach, and want of sleep, from Vapours ascending, arising from a Sulphurous effervescency : the remedying of all which you must see in their proper places, at Sect. V. § 13. 14. 15. 16. 17. 18. 19. 20. following.

The Cure of Ephemera.

§ 13. *It is performed by exhibiting an Acid Salt in a proper Vehicle, that thereby a gentle sweat may be procured, as Tartar Vitriolate, Oyls of Sulphur, Vitriol, and Salt, given in a just Dose and exhibited in a pleasant Juleb, as Juleb of Roses. Or R^x Carduus water, Sorrel water, A. Ziv. Syrup of Red Poppies ʒj. Oyl of Sulphur, enough to make it grateful : Give it, and let the sick Sweat.* § 14: *Let the Diet be cooling and moistning, as Barley-Cream, cooling Broths, Almond Milk, cooling Emulsions, Small Drink or Water and Sugar : Fountain Water mixed with Syrup of Limons.*

§ 15. If

§ 15. If it comes from cold Air, or external cold received, you may exhibit the Prophylactick water of Sylvius, or that mixt with Tartar Vitriolate, and cause the sick to sweat upon it. § 16. If it comes from the heat of the Sun or Air, *R* Scordium water $\mathfrak{z}\mathfrak{v}$ j. Angelica water $\mathfrak{z}\mathfrak{i}\mathfrak{j}$. Syrup of Poppies $\mathfrak{z}\mathfrak{i}$, spirit of Salt dulcified $\mathfrak{z}\mathfrak{i}\mathfrak{s}$. mix for a Dose. § 17. If it comes from strong Drink, taken too largely, you may first Vomit by giving warm water: then exhibit this: *R* Rose-water $\mathfrak{z}\mathfrak{x}\mathfrak{x}\mathfrak{i}\mathfrak{i}$. flowers of dried Roses $\mathfrak{z}\mathfrak{i}$. Oyl of Sulphur gut. $\mathfrak{x}\mathfrak{x}\mathfrak{i}\mathfrak{v}$. infuse, extract a Tincture, strain, & sweeten with syr. of Quinces and Fijubes, *A.* $\mathfrak{z}\mathfrak{i}\mathfrak{s}$. § 18. If it comes from too much exercise, and weariness, *R* Angelica water the greater Composition, Bawm Water, *A.* $\mathfrak{z}\mathfrak{i}\mathfrak{j}$. Spirit of Salt dulcified gut. $\mathfrak{x}\mathfrak{i}\mathfrak{j}$. Juleb of Roses $\mathfrak{z}\mathfrak{i}$. mix them. § 19. If it comes from vehement Anger, Cares, or great Sorrows: Or Watchings, you may give this: *R* Barley Broth $\mathfrak{z}\mathfrak{x}\mathfrak{v}\mathfrak{i}$. Poppy-seeds $\mathfrak{z}\mathfrak{i}\mathfrak{s}$. make an Emulsion to which add Syrup of White Poppies $\mathfrak{z}\mathfrak{i}$. Poppy-water $\mathfrak{z}\mathfrak{i}\mathfrak{s}$. Aqua Vitæ Mathioli $\mathfrak{z}\mathfrak{i}$. Oyl of Sulphur gut. \mathfrak{x} . mix them: of which give the Sick $\mathfrak{z}\mathfrak{i}\mathfrak{j}$ often. Or you may give this: *R* Prophylactick water of Sylvius $\mathfrak{z}\mathfrak{i}$. Laudanum gr. $\mathfrak{i}\mathfrak{j}$. or $\mathfrak{i}\mathfrak{i}\mathfrak{j}$. dissolve and exhibit it. § 20. If it comes from crudity or illness of Stomach, or Surfeiting, first Vomit with warm water, or Sal Vitrioli: then give Quintessence of Wormwood in Canary: after exhibit an emollient and Laxative Clysters, abstaining some time from Meat and Drink, and then eating very sparingly. § 21. If it proceeds

from a hard, straight, and compacted skin, where the Pores are totally obstructed; you must use manifold Frictions: and give Sudorificks to provoke Sweat mixed with dulcified Oyl of Vitriol. § 22. If it proceeds from a Bubo, you must ease the pain as much as may be, give things which Sweat: and endeavour to Suppuration, which see in its place. § 23. If the Head-Ach, and its pulsation be violent, foment it with this Epithem; *R* Rose-water $\mathfrak{z}\mathfrak{i}\mathfrak{j}$. Poppy-water $\mathfrak{z}\mathfrak{i}$. Vinegar coloured with Saffron $\mathfrak{z}\mathfrak{v}\mathfrak{i}$. Opium $\mathfrak{z}\mathfrak{i}\mathfrak{s}$. dissolve and mix for an Epithem, with which foment the Forehead and Temples. Or, *R* Unguentum Populeon $\mathfrak{z}\mathfrak{i}\mathfrak{j}$. Opium dissolved in Oyl of Roses $\mathfrak{z}\mathfrak{i}$. mix for a Liniment; with which anoint the Region of the Temples, and also spread it on a brown Paper, and apply it. § 24. If putrefaction be feared, a Vomit may be procured, or a purge given, with the exhibition of proper Clysters.

II. $\Sigma\upsilon\nu\chi\circ\ \&\ \sigma\upsilon\delta\epsilon\gamma\varsigma$. Synochus non putrida, Diaria plurium dierum, Ephemera of many days.

§ 1. This Disease is commonly cured by Sweat: Or by cooling Alteratives, or gentle Evacuation. Or a Critical Bleeding at Nose: being terminated within the fourth, or at the most within the seventh day, unless by some Error, of the Patient or Physician, it degenerates into a Putrid Fever or some worse Disease. § 2. Some Physicians let Blood speedily, little in quantity and often: though Galen did it till the Patient fainted away, giving a great quan.

quantity also of water to the Patient to drink. § 3. However you are to consider whether it springs from fullness or not : if it comes from fullness, you must make an Evacuation of the first Region, least the Feaver should degenerate : this you may do with Manna, Casta, Tamarinds, Rhubarb, Syrup of Roses solutive, Syrupus Succorum, Cream or Crystals of Tartar, &c. if the Stomach be afflicted with great fullness you may Vomit with Wine or Oxymel of Squils, or Salt of Vitriol : and in very strong and rustick people with a small Dose of Vinum Benedictum.

§ 4. If the Disease comes not of fullness, you are in the first place to sweat with Tinctura Diaphoretica Paracelsi, Carduus, Antimonium Diaphoreticum, Salt of Tartar, Bezoar Mineral, and other Alkalies, as Salts of Wormwood, Centory, Carduus, &c. which may master and overcome the dominion of the Acid, which is the efficient cause of the Disease. § 5. Before purging and after sweating, especially if the Guts abound with Crudities, you ought to exhibit an emollient and laxative Clyster. § 6. The sick having thus purged or sweat, you are next to administer cooling Alteratives. Juleps may be made of the Decoction of Barley or Endive, Succory, Borrage, Bugloss, Lettice, with Waters of the same, to be sweetened with Syrup of Succory, or of Roses solutive. You may also give this cooling Emulsion: R Almonds blanchæ and steeped in Rose-water ℥i. the four greater cold seeds, Poppy-seeds, A. ℥ij. beat all in a Mortar, putting

in by little and little Barley-water ℔jls. strain, and dissolve therein sugar of Roses ℥ij. for an Emulsion of three Doses, which will be also the more excellent if the sick wants rest. An Epithem, R Lettice, Bugloss, and Poppy-waters, A. ℥ij. Vinegar of Roses ℥j. saccharum Saturni ℥i. Camphir gr. vj. make an Epithem to be laid upon the Regions of the Heart and Liver. Also you may anoint with Unguentum Populeon, or Refrigerans Galeni : you may give the sick Broths made of cooling Herbs : and let his Drink be Barley-water, or Water boyled with Bread, and sweetned with Syrup of Succory or Maiden-hair. § 7. Lastly, Corroborate all the weakened part with Manus Christi pearled, Diamargariton frigidum, Conserve of Roses dissolved in new warm Milk, or Whey of Milk, or Sugar of Roses, &c.

III. Συνοχὴ καὶ σήψις, Synochus Putrida, febris Continens, The containing, Putrid, or Rotten Feaver.

§ 1. The Indications of Cure are threefold : the first regards the Feaver it self : the second the cause thereof : the third, the Patients strength. And these three Indications are to be considered in the Cure of all continual putrid Feavers ; which we shall here first shew in general Terms. § 2. The first Indication, which respects the Feaver. Since the Febricitick matter is apt like Leven to corrupt the rest of the humours (for which cause it ought not to be detained in the Body ;) and since Nature even

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in the beginning of the Feaver, moves it, and would willingly either cast it out of the Body, or thrust it into the more Ignoble parts: the prudent Physician ought to assist her in her Intentions: and therefore first *Vomiting is rightly Instituted with Aqua Benedicte Rulandi, Vinum Benedictum, Asarum-roots, Sal Tartari Emeticum Mynsichi, or with that Ipecifick Antifebricitick Emetick, Sal Vatriol*, which may be generally given in all sorts of Feavers in every Constitution Sex, and Age. Secondly, *Purgation*, wherein *Lenitives* ought to proceed, by reason of the Debility of the Stomach, plenitude of humours in the Meseraicks, and stoppage of the Belly in the beginning of the Disease (through the violence of the heat) which ought to be removed by *Emollient Clysters*. Here *Diacassia* mixed with *Syrupus succorum* is of singular use *Elect. Lenitivum, Catholicon*, and such like. But before these things are done there ought (according to the opinion of *Hippocrates*) to precede first a *Cutition of humors*. Secondly, a *preparation of them*, where *attenuaters, incisers, and aperitives* take place, of what kind are *Endive, Succory, Borrage, Bugloss, Dandelion*, and such like, as also *Spirit of Tartar Compound*, which ought to be given with *Caution in Cholerick Bodies*, because of the Treacle-Water, and wholly omitted if the humours are not in the first Passages. § 3. *The second Indication which respects the Cause of the Feaver.* The Cause of the Fea-

ver is the Contest of the differing Salts, wherein the *Acid* has dominion; and the *effervescenty* arising from that Contest: the ablation of those Causes are first, by things which must overpower the *Acid Salt*, viz. by *Alcalies*, of what kind are Salts of Tartar, of Wormwood, of Centory, of Carduus, Coral, Pearl, Crabs-Eyes, and others of like sort with them. Secondly, by Exhibition of *Sudorificks*, whereby the Pores of the Body being opened, the *Effervescenty* raised, may no longer lye, heat and inflame, but transpire, and leave nature discharged of an Enemy. Here *Spirit, and Rob or Quid-dony of Elder and Dwarf Elder, Annumonium Diaphoreticum, Bezoar Minerale, Solare, and Animale; Bezoar stone, spiritus ex tribus, Elixir Vita Quercetani, Tinctura Diaphoretica Paracelsi, and Tinctura Auri*, are known to be of excellent use. § 4. *The third Indication which respects the strength of the sick.* Here we are to Consider, first, *their Food*, which ought to be of good juyce, easy of Digestion, and of small Excrements, least the strength of the Sick be overcome. As to the Quantity of the Food, the Diet may be the more liberal where the strength of the sick has been diminished by many dejections or other evacuations. As to the quality, it ought to be thin where suffocation is feared; nourishing where the strength is much decayed; and Medicinal that it may resist both the Disease, & its cause. Secondly, *their drink* ought to be nourishing in respect to the weak-

ness

ness of the sick: *cooling* in respect to the Disease: and *Alcalious* in respect to the Cause. Such are Barley Broths: Whey corrected with Fennel and Aniseeds: Water depurated with Salt of Tartar, or of Wormwood ℥j of the Salts to a quart of Water, into which you may put of the Quintessence of Cloves or Nutmegs ℥ij. white Sugar Candy ℥vi. Or ℞ Water ℔iij. Harts-horn calcined ℥ss. boyltill ℔i. is consumed, strain and add Quintessence of Nutmegs ℥ij. White Sugar Candy ℥vj. dissolve and give it for ordinary Drink. Moreover some commend the *Alexandrian Julep* to be very good, and extream pleasant.

The singular Cure of a Synochus Putrida.

§ 5. First exhibit a Vomit, (unless the Feaver have its rise from evacuations, fasting, travelling, hard labour, &c.) it may be of excellent use, if there be a fullness of Stomach, or the Stomach be vexed with Choleric humours, which is known by bitterness of the Mouth. You may give to children and weak persons *Sal Vatrioli*: To grown people and strong *Sal Tartari Emeticum Mynsichti*. Among Vomits *Antimonials* are here preferred before all others: because they both happily empty all humours promiscuously, and because they are most friendly to mans Nature, by degrees bringing all the humours in man after a peculiar manner to a most laudable state; which power it is to be doubted whether it be in o-

ther things in like manner or no: we certainly know it is in Antimony, whatever men whether Learned or unlearned say to the contrary. But we ought to beware that they be not exhibited in too great a Dose, seeing indeed every excess is an Enemy to Nature: it is always far safer, that they be given rather in too small than too great a Dose; for no harm will at any time follow the first, though often the latter: for neither do any other purgers, and especially Antimonials, (rightly prepared) and used in a less quantity (viz. in so small a Dose as to empty no humour whether upwards or downwards) hurt any, which is known by manifold experience: but they alway then are profitable, either by amending the hurtful humours in the Body, or by preparing them farther for the following purge, a thing which ought to be specially noted by all young Physicians. Moreover, we know a certain Physician in London, of long and great Practice, who to all his Patients, of what Age, Sex, Constitution, or Strength, so ever, and in every Disease, does continually give of the Infusion of *Crocus Metallorum*, in all the Medicaments he exhibits, even to newborn Children, but the Dose is so proportioned to every state, as not to encline to Vomit (except when he designs Vomiting) and the event is is crowned with as great Success as his Practice is universal: yea he exhibits it in every Cordial he appoints, I have often heard him say, no Cure.

Cureable Disease is able to withstand its Force, which although it (so given) operates insensibly, yet like a Giant it roots out, and overcomes Diseases. For by this means the Powers of Antimony, (which are purify it self, and of the most purifying faculty, witness their cleansing of Gold, and purging it from its Leprosy) are silently or quietly insinuated into the whole Mass of Blood, where they exercise their depurating force, in the same manner, as in the Fire they do upon Metals. But this by the way; to return. After a Vomit, you may give temperate or cooling Purges, according to the Nature of the humour abounding, as Pulp of Cassia, Syrup of Damask Roses, &c. § 6. Secondly, Exhibit this following Potion: *Rx Barley Water ʒxxxij. salt of Tartar ʒj. Syrup of Succory ʒiv. mix. Dose ʒvi. two or three times a day. Or Rx Barley-water ʒxxxij. Poppy-water ʒxvj. Canary ʒviij. sal Prunellæ ʒij. Syrup of Purflane ʒviij. mix. to be taken ʒvj. or more at a time. Or, Rx Barley broth ʒij. Hartshorn calcined to whiteness ʒss. mix, boyl a little, and add sal Prunellæ ʒij. sal Tartari ʒss. Syrup of Succory ʒij. These things may be given as ordinary drink; but if by this means the Feaver does not totally Vanish, you must cause the sick to sweat with Bezoar Minerale, a Carduus Posset, or with Venice Treacle or some such like. § 7. Thirdly, Give the sick strengthening things, as Electuarium ad Tabidos, Confectio Alkermes Vulgar,*

and of Our Prescription, with other Cordials and Corroboratives.

IV. Febris Quotidiana Continua, The Continual Quotidian Feaver.

§ 1. If the Body is bound exhibit an emollient or laxative Clyster, but if the Stomach be oppress'd give a Vomit. § 2. If nature and the matter provoke, and it be plentiful and the sick be strong, evacuate downwards, first with Lenitives: where, if you give Syrup of Roses Solutive, you may do well to add a little Spirit of Sal Armoniack to it, that it may the more easily penetrate the Veins, and not to be turned by the heat of the Stomach into Vapours, which will cause thirst; Pills of Fumitory are good in this Case: so also Agarick, and Myrobalans may be given in Infusion in cooling waters: but some advise rather in substance. Here also take place Cassia, Manna, Tamarinds, Catholicon, Electuarium Lenitivum, Diaprunum simplex, Syrup of Succory with Rhubarb; Decoctions or Infusions of Agarick or Diasena, Pilule Schroderi, Tartareæ Quercetani, &c. *Rx Catholicon ʒvj. Lenitive Electury, Syrup of Roses solutive, A. ʒss. spirit of sal Armoniack gut. xij. mix for a Bolus. Rx depurated juices of Endive and Succory, A. ʒjss. Catholicon ʒss. Syrup of Roses, A. ʒjss. spirit of sal Armoniack gut. xij. mix for a Potion. Resin of Jallap given in Pouder, or made up into a Bole with Catholicon is a very excellent thing, drinking after it a draught of Whey (especially of Goats Milk) clarified*

ed with Endive, Succory, and Borrage. Infusion of *Rhubarb* in Whey, may also be given with Syrup of *Roses*, giving after it a quart more of Whey to drink.

§ 3. After due Purgation you must provoke Sweat with *Spiritus ex tribus mixt with Sales of Wormwood, and Carduus*, and gut. xvi. of *Spirit of Sal Armoniack*, which open the Pores, provoke Sweat powerfully, and send forth the Febricitick fumes incontinently: Or *R Venice Treacle* ʒij. Salt of *Wormwood and of Carduus*, A. ʒss. *Spirit of Sal Armoniack* gut. xij. mix for a Bole, it sweats powerfully: to quench thirst: *R Aqua Papaveris & Menthae*, A. ʒiv. *Hartsborn calcined* ʒj. *Spirit of Sal Armoniack* gut. x. *Syrup of Succory* ʒj. mix them.

§ 4. After sweating strengthen with *Troches of Rhubarb, of Wormwood, of Agrimony, and Elixir Proprietatis*; give *Emulsions* or *Almond Milk*, for they are more pleasing than *Juleps*: and better also if with the Feaver there is an Inflammation of the Lungs, a thin Catarrh, or a dry distemper of the Bowels, Let the Diet be sparing for three days, especially if there are Crudities in the Stomach and first passages; and at first give small *Hydromel* or *Metheglin*, (in which a proportionate quantity of Salt of Tartar has been dissolved) instead of Wine or Beer, and let no fish be eaten during the whole Course of the Disease. But better than *Hydromel* is a Decoction of *Burdock root*, which causes the Disease to be pist away in a white matter almost like Milk,

The Cure of Epiala.

§ 5. The Cure differs not much from the former, but you ought to give a preparative *Spir. of Niter*, or of *Sal Armon.* in *Juniper-water*, which excellently cuts tough flegm and other viscous humors.

§ 6. Take care that Vomiting be not neglected, but procured with ʒvj of *Juniper-berry water distilled per descensum*: Or with ʒj of *Sal Vtrioli*, given ʒjat a time at half an hours distance. It brings forth Flegm powerfully, and, if the sick is strong, may be repeated again the next day: upon the fifth and sixth day after give it again in like manner. And no ways inferiour is the *Aqua Benedicta Rulandi*, if given in a just Dose not too large.

§ 7. Fortify the Stomach with *Wormwood Wine*, which is an Antidote and specificck in this Case: Some advise to this: *R Canary* three spoonfuls: *Oyl of Vtriol* gut. ix. mix them: Others to take *Aqua Vita* ʒij. drawn out of *Juniper-berries*.

The Cure of Febris Syncopalis Minuta.

§ 8. In the Paroxysm, the Resolution of the spirits must be prevented, first by *Ligatures and Frictions* or *rubbings*, in such whose skin is more than ordinarily hard; Secondly, by cooling the Air upon their Faces with Fans, sprinkling them with cold but sweet smelling Waters, as of *Roses* alone, or mixt with *Vinegar*: and by Bathing the Testicles of Men and Duggs of Women with *Rosed Vine-*

Vinegar cold. *Thirdly*, by pulling of them by the Nose, Hair, often calling upon them, &c.

§ 9. *The sick having recovered the fit*, give a little Canary or choise Cinnamon or Angelica-Water the greater Composition mixed with cold distilled Bawm or Angelica water: as also Canary or Cinnamon water mixed with Confectio Alhermes Vulgar or of Our Prescription. Or this, R Angelica water the greater Composition Cinnamon water, A. ʒij. Orange-flower-water ʒijss. Bawm, and Borrage water, A. ʒj. Confectio Alhermes ʒij. Sugar of Roses enough to sweeten it. Or, R spirit of Angelica ʒiv. Oyl of Cinnamon ʒls. mix and give half a spoonful in Sack.

§ 10. *Outwardly*, apply to the Heart cooling and strengthening Epithems: anoint the Stomach with Oyls of Roses, Quinces or Myrtles mixed with a little Chymical Oyl of Sassafras: so also the Back-Bone, and other weakned parts chiefly the Joynts. § 11. *Let the Body be loosned with a Clyster*, and the sick kept in a cool Air, their diet thin, cooling and restorative, as Chicken Broth boyled with Borrage, Bugloss, Sorrel, to which may be added Bawm water, Pomgranate juyce and a little white Sugar Candy: if a more free Diet is required, give Cream of Barley with juyce of Oranges; as also restorative strong Broths pressed out of Flesh extraordinarily boyled, and made pleasant with Orange-juyce aforesaid: also you may give Yolks of Eggs, Lambs stones, Cockstones, flesh of Chickens, Pa-

tridges, &c. with Verjuyce. *If the sick has no inward Inflammation of any Bowel*, they may drink with their Meat a Glais of generous Wine, or strong Beer, neither new nor stale: but if there is Inflammation, or at times between Meals, let his Drink be Barley water made pleasant with syrup of Pomgranates: Or clarified Whey, sweetned with Syrup of Purslane: Or Julep of Roses. § 12. *The swooning fits being removed*, and the Patient strengthened, you must then bend your Industry to remove the Fever, and its Cause; which may be done by Purging, Sweating and Alteratives, as at § 1. 2. 3. and 4. we have taught.

The Cure of Febris Syncopali Humerosa.

§ 13. *This differs not much from the former cure*, save, first, Frictions here ought to be much, and often, from the beginning of the Disease to the end, with course Cloths, beginning above and so rubbing downwards: when after Friction the Limbs are very warm, anoint them with Oyls of Camomil, Dill, or Costus; by this means the Spirits and humours offending, ready to suffocate the Internal heat, will be drawn outwards. § 14. *Secondly*, in the fit, besides the former rubbings, do what we advised at § 8. above, and Syringe up the Nostrils this: R Cinnamon water, Orange-flower-water, A. ʒj. Quintessence of Cloves ʒij. mix, and Syring up the Nostrils a little thereof. § 15. *Thirdly*, being a little

recovered, give this by spoonfuls :
 ℞ Angelica, Bawm, Rosmary, and
 Orange-flower-waters, A. ℥j. Cinna-
 mon-water ℥vi. spirit of Earth-
 worms ℥iij. Confectio Alkermes
 ℥iss. syrup of Citron peels ℥ij. mix
 them. Or ℞ Electuarium ad
 Tabidos, Citron peels preserved, A.
 ℥j. Confectio Alkermes ℥ss. species
 Diambix and Diamoschi dulces, A.
 ℥j. with syrup of preserved Nut-
 megs, make an Electuary: Dose
 ℥j. § 16. Fourthly, to the Heart
 apply cooling Epithems, and to the
 stomach young Pigeons, with Fo-
 mentations and other things of
 like nature, iterating ever and a-
 non the Frictions, which in this
 Disease must never be omitted.
 § 17. Fifthly, that because this
 malady proceeds from a great abun-
 dance of pituitous and crude hu-
 mours, the Air ought to be tem-
 perate, light, pure, and dry: the
 sick ought to eat meats of good
 juyce, easily digested, and pre-
 pared with hot expectorating
 herbs. Let his drink be thin,
 not very strong, and his sleep
 moderate. § 18. Lastly, When
 the sick has gathered a little
 strength, you are to expel the Mor-
 bifick matter, by Clysters and Pur-
 gations, which ought to be gentle;
 and often exhibited, fitting Pre-
 paratives being taken between
 Purge and Purge: for this pur-
 pose Hiera cum Agarico, in re-
 gard of the Stomach is much
 commended.

V. Kaſſo, Causos Conti-
 nuus, Febris continua Tertiā-
 na, Febris Ardens Continua, A
 Continual Tertian, or burning
 Feaver.

§ 1. What we advised in the

last Section at § 1. 2. 3. is to be
 understood here, and therefore not
 now to be said again; but in respect
 of Purging this is to be considered,
 that you may make use of Spe-
 cial Cholagogues, among which
 Rhubarb is the most esteemed,
 which may be given both in Pou-
 der and Infusion. Or ℞ Carbo-
 licon ℥vi. Diaprunum simplex ℥ss.
 Rhubarb ℥i. mix them. Or
 ℞ Cassia new drawn ℥j. pulp of
 Tamarinds ℥ss. with syrup of Ro-
 ses ℥vj. make a mixture to which
 add spirit of sal Armoniack gut. xij.
 If the Feaver be not very violent
 you may give one Dose of Pilule
 Rudij, as also the Infusion of
 Rhubarb and Myrobalans, with
 some drops of Spirit of Sal Ar-
 moniack or of Oleum Tartari per
 deliquium. § 2. But Fernelius in
 Meth. Medend. lib. 3. cap. 3.
 saith, That all superfluties in the
 Stomach, Spleen, Pancreas, Mesen-
 tery, and cavity of the Liver, are
 conveniently emptied out by a Vo-
 mit, when they will not be removed
 by things which work downwards,
 though many times administred:
 and it is often found that the
 Morbifick matter being Vomited
 up, the Feaver is taken away
 at the first, which otherwise
 would have proved long, had
 that diseasy matter been trans-
 mitted to the more inner and
 noble parts of the Body, and
 been firmly mixed with the
 Blood. Now in exhibiting of
 Emeticks, the mildest are to be
 given first, as Barley water luke-
 warm mixed with Oyl Olive, or
 a little White Wine Vinegar: Or
 Oxymel simple or of Squills with
 Chicken Broth, all which are to be

be given to the quantity of a pint or more, least they should otherwise remain in the Stomach without effect : if these do nothing, you are to give stronger, as *Sal Viatrioli*, Pouder of *Asarum* ad ℥ss, ℥ij, or ℥j. in Broth : Or decoction of *Asarum* roots ℥iij. in Chicken Broth : also *Aqua Benedicta* made of *Crocus Metallorum*, which does for the most part eradicate all sorts of Feavers whether continual or intermitting. § 3. Not only in the beginning, but also through the whole course of the Disease, Clysters are to be given either every day, or every other day, unless the Belly be loose : Let them be made of things cooling and emollient, as Decoctions of Barley, Prunes, Mallows, Violet leaves, herb-Mercury, Orach, Lettice, Bears foot, Endive, Succory, Water-Lillies, Housleek (of which not above three or four Blades must goe into one Clyster, because it cools potently :) in which Decoctions you may dissolve *Cassia*, *Catholicon*, *Diaprunum simplex*, Honey of Mercury, Oyls of Water Lillys or Violets, &c. then exhibit it not hot but only Blood-warm. § 4. And because in sect. III. § 2. foregoing, we advised to Purgation either by Vomit or Stool, not before a Cotion of Humors, or till the Morbisick cause is ripened and digested ; yet from the beginning of the Disease, the first passage nearest the Stomach ought to be cleansed with either very gentle Emeticks or Catharticks, according as you see Nature most incline ; and then after you ought to use such Medica-

ments, as may cause digestion, and prepare the crude humours for the aforementioned evacuation : in the mean time also, you must temper the feaverish heat, hinder putrefaction, and open Obstructions, with proper Broths, Juleps, Emulsions and such like. A cooling Broth : R roots of *Succory*, *Dandelion* with its leaves, A. M. ij. leaves of *Sorrel*, *Endive*, *Fumitory*, *Damask Roses*, A. M. i. Barley broth ℥vj. boyl, strain, and sweeten with Syrup of *succory* : to which add *sal Armoniack*, *sal Absinthij*, A. ℥jss. A Julep : Take juyce of Apples new drawn and scented ℥vj. juyce of Oranges ℥iij. juyce of *Pumgranates* ℥j. *Borrag*e water ℥iv. mix and with white sugar Candy ℥iii. sweeten. Another Juleb : Take *Canary* ℥ij. juyce of *Limons* ℥jss. *sal Prunella* ℥jss. mix for to be given three or four spoonfuls at a time. An Emulsion : Take *Barley Broth* ℥iij. sweet *Almonds* ℥iij. of the four greater cold seeds, A. ℥jss. make an Emulsion, strain, and sweeten with white sugar candy ℥jss. But if there is a Loosness withal, you may make Juleps or Emulsions of things which thicken, as Waters of Lettice, Purslane, Plantane, Water-Lillys, Poppies : the cold seeds, Poppy-seeds, Syrups of Lettice and Purslane, &c. § 5. All these things being done, and proper Evacuations made all in due order, you are to exhibit sudorificks such as we before hinted, at Sect. IV. § 3. But the *Panacea Antimonij*, or *Bezoar Mineral* given in a just Dose in *Carduus* water are thought to exceed : to these you may add *Laudanum Nostrum*

& Paracelsi. § 6. After the former Evacuations, nature for the most part endeavours to expel the reliques of the Morbifick matter by Urine, in which office you ought to assist her, by giving temperate Diuretick Medicaments, made in the form of Emulsions, Juleps or Broths; but Emulsions are the most pleasant: you may make an Emulsion of the four greater cold seeds in Parsley water, to ℥ij of which you may put Salt of Tartar ℥j. Or Take Barley Broth in which boyl roots of Fennel and Parsley: with this Decoction make the Emulsion aforesaid, which sweeten with white sugar candy ℥j or ℥jss. § 7. If the Feaver still continues, you must often repeat your Purgations, which may be with Agarick, double Catholicon, Diaprunum solitivum, Diaphœnicon, Electuary de succo Rosarum, Diacarthamum, Infusion of Rhubarb, Agarick and Sena in a Decoction of Tamarinds: using between whiles preparatives, digestives and coolers: for if you cease purging before the Feaver is perfectly abated and gone, the sick will be in danger of a Relapse. But if after many purgations, a lingring & wasting Feaver continues, which by little and little pines away the Patient, and brings on a Tabes, Atrophia, or Hæstick, you must then cease Purging, and wholly apply yourself to Alteratives, and a good Diet. § 8. Among Alteratives in this Case, Zacutus in Prax. lib. 3. obs. 26. highly commends a Decoction of Camomil: And experience has confirmed that no Medicament exceeds a well prepared

Elixir Proprietatis made with Tartarized S.V. and given ad gut. xx or xxx. or more in any proper Vehicle. Cold water given in large quantity in continual Putrid Feavers, was of use among the Ancient Physicians: and it is so excellent an expedient, that it has saved many a sick Patients life; and many have dyed only and truly for the want thereof. If any fear the Crudity of the Water, you may prepare it thus; R^x Fountain-water ℥ij. Calcined Hartshorn ℥ss. boyl till half is consumed, strain, and sweeten with white sugar candy ℥ss or ℥vi. Or this, R^x Fountain water ℥ij. calcined Hartshorn ℥ss. Salt of Tartar ℥ss. boyl till ℥ij. is consumed: strain, and sweeten with syrup of red Poppies. Or this, Take Water ℥ij. Salt of Tartar ℥j. dissolve, filter, and give the sick to drink: if they desire it sweetned, do it with syrup of Red Poppies. Or R^x water ℥ij. Spirit of Vtriol or Sulphur, so much as may make it of a pleasant Acidity: the sick, if very earnest or thirsty, may take it off at one drinking, and without any danger: because those Vtriolic spirits mixt with Water, are very like the Acid, Mineral Fountains and Wells; open all Obstructions, quickly pierce, and make their way through the the Bowels, not staying in the Hypochondria, (as simple cold water is wont to do,) but are speedily piffed forth. § 9. If a Lingring Feaver arises from Obstructions (as it does often in Children,) frequent and gentle purging, which takes away the humours by little little, may remove the Disease;

et seq. all.

especially if the Purge be made with Rhubarb, which opens Obstructions and strengthens the Bowels; and is commended by Montanus to the skies. Among other things (saith he) I shall commend one which I have, by long experience, found never to fail, viz. That the sick take ℥iv. every Morning (which is the Dose for Children) of the Infusion of Rhubarb ℥ij in Endive-water ℔j. For I never knew Feaver from Obstructions, which was not cured by this Medicament, provided it was taken constantly without weariness, or giving over. I have sometimes seen most gross humours Impacted in the narrow passages of the Body, and such Obstructions, as by reason of the weakness of Natural heat, could scarcely be removed to be cured by Rhubarb; but I never cease giving the Medicament till I see the Feaver, and the Obstructions wholly gone. Some order a Diet drink to be made of Rhubarb, to be given as ordinary drink, which is done by Infusing Rhubarb in Powder ℥j. dyed up in a rag in two or three pints of small Beer or Ale an whole day cold, of which the Child may drink a Month together or longer. § 10. To strengthen Nature which in all Violent Burning Feavers is much distressed, you may give corroborating Conserves, Preserves, Electuaries, and Boles: as Diamargariton frigidum, Diarrhasantalon, Diarrhodon Abbatis, Confectio Alkermes, & de Hyacintho, prepared Coral, Pearl, Ivory, Hartshorn, &c. which may be mixt with Pre-

serves or Conserves of roots of Bugloss, leaves of Sorrel, Wood-Sorrel, Lettice, Purslane, Succory, flowers of Cowslips, Borrage, Bugloss, Violets, Rosemary, Roses, pulp of Citrons, &c. as the Physician shall see cause. You may also give this Julep: ℞ Waters of Sorrel, Baum, Rosemary, Angelica, Orange-flowers; A. ℥jss. Syrup of Limons and Pomegranates; A. ℥ij. Canary Wine ℥ij. Confectio Alkermes ℥ij. sweet Spirit of Salt ℥ss. mix and let the sick take often of it in a spoon. § 11. But besides Inward Medicines, Topicks are applyed, to open the Pores of the skin, allay the Feaverish heat, and to strengthen the principal parts, and are chiefly to be applyed in the state or declination of the Disease: not in the beginning, or encrease (whilst the heat is in the Bowels) nor when the Crisis is at hand. An Epithem for the Heart: ℞ Poppy, and Angelica-waters, A. ℥iv. Rose-water ℥ij. Vinegar of Roses ℥j. Saffron gr. xv. Camphir ℥ss. dissolved in Spirit of Angelica, mix them. A more solid Epithem for the Heart: ℞ Mithridate, Diafcardium, Confectio Alkermes, & de Hyacintho, A. ℥ij. Diamargariton Frigidum ℥jss. Vinegar of Roses ℥ss. mix and therewith besmear the Heart. Young Pigeons split through the Back-bone, and applyed are also very good: sometimes also they are applyed to the Wrists and Soles of the Feet; and to the Feet in great Extremities are applyed Pickled Herrings. To these add, Epithema Cardiacum, and Epithema Hepaticum, which is to be applyed to

the Liver. To the Testicles you may apply *Epithema Hypnoticum Mynsichtz*, which is of singular use; and, if the Sick is in danger of Raving, to the Temples also. To the Soles of the Feet, the leaves of Lettice, Purslane, and Water-Lillys being applyed, are of good use. If the Feaver proves of long continuance, and in a Body hot, dry, and lean, whereby a Hectick is feared, a Blood-warm Bath of fresh Water may prove profitable. § 12. Lastly, if the Feaver terminates by way of Crisis, and the Crisis be by Stool, the Patient is secure from Relapse: But if it be by Sweat or Bleeding, then the thinner part is only expulsed, and the thicker is left behind, which being afresh inflamed, a Relapse is certain to follow, or some new Disease; all which, if you would prevent, you ought to exhibit once or twice a gentle Purge, to carry away all the Reliques of the Morbifick Cause.

The Cure of the Symptoms of Burning Feavers.

§ 13. First, Extream Thirst. If it be from a Chollerick, hot, sharp, or nitrous humour in the Stomach, it ought to be expelled by Vomit or Stool. If the Patient be sick at Stomach, by Vomiting with simple syrup of Vinegar ℥jss. mixt with Barley water ℥vj. Or the Decoction of Radishes: if this does not, you may give *Oxymel Scylliticum*. Or you may purge with this, R Pulp of Cassia ℥j. pulp of Tamarinds ℥ijj. Catholicon ℥ij. mix them for a

Dose. Or, R Cassia new drawn ℥j. Catholicon ℥ss. Decoction of Barley, Prunes, Tamarinds, ℥iv. Syrup of Roses ℥vj. mix for a Portion. But if it be from a Burning heat caused by the Feaverish effervescency, you must give cooling and moistening drinks, and such Water as we have mentioned at § 8. foregoing. If moderate drinking will not do, Let them take the said Waters by Spoonfuls in a Spoon, and hold them a little in the Mouth before they goe down, by this means (as it were of eating Water) the thirst will be wonderfully quenched with a small quantity, which would not do by drinking six or eight times as much. Here are also commended a Sage Posset, and a Lemon Posset; both which quench thirst admirably, especially eaten with a Spoon, as aforesaid: Let them be in a cool Air, keep silence, shut their Mouths, Breath only through the Nostrils, and endeavour to sleep: they may also hold in their Mouths Barley water mixt with juyce of Lemons, or in which a little *Salt Prunelle* is dissolved: Or the slice of a Lemon, or of a Cucumer or Melon, steeped in cold water, or Poppy-water: Or a piece of Roach Alum which quenches Thirst to a wonder: Or a piece of Crystal to hold in the Mouth: If these things do not, the sick must be permitted to drink, (not in the beginning or increase of the fit, but) in the height of the fit sparingly; and afterwards in the declining of the fit more largely and freely, because then it drives

drives the heat outwards, and sometimes causes Sweating. § 14. Secondly, *Hiccups*. The Cure hereof we have particularly delivered in cap 30. sect. 18. to which in part we shall refer you. But *Sylvius de le Boe*, lib. 1. cap. 23. sect. 19. saith, That Opiumes do conduce before all other things in curing of any *Hiccough*, not only in as much as they temper any sharp Humors, but moreover in as much as they blunt the sense of the Stomach, and perhaps also make the Animal Spirits more slow of Motion; if they be used by times in a small quantity and so long, till it either ceases or is notably diminished. *Lemnius* saith, That sometimes this Symptom comes from the immoderate use of cooling things, whose words *Schenkius* thus relates, *Hiccoughing* in Feavers does sometimes follow an over-abundant use of cooling Juleps; and I have seen many so affected by the unadvised rashness of Physicians, which Symptom contrary to the Expectation of all Men, I cured by giving the sick Wine to drink. § 15. Thirdly, *Vomiting*. If it be Critical, it ought by no means to be stopped, for it introduces Health. But if it be Symptomatical, you must cure it as we have taught in cap. 30. sect. 12. of this Book. This following is good: *R. Diascordium* ʒij. *Confectio de Hyacintho* ʒj. *syrup of white Poppies* ʒj. *Plantane water* ʒij. *Fennel water* ʒjss mix them. If it stays not the Vomiting by reason of plenty of humours in the Body or Stomach, they ought to be taken away a by gentle

Vomit, as the *Aqua Emetica* hi; after which if the Vomiting still continues, you may give this, (if an Acid Salt abounds.) Take *Waters of Mint*, *Fennel*, *syrup of Myrtes*, A. ʒj. *Aqua Vina Martioli* ʒjss. *Old Treacle* ʒij. or *Laudanum* gr. ij. mix them. Or this, (if a fixt and lixivate Salt abounds.) Take *waters of Plantane*, *Purslane*, *syrup of Purslane*, A. ʒj. *Diascordium* ʒjss. or *Laudanum* gr. ii. *spirit of Salt dulcified* ʒjss. mix them. Or, Take *cleansed Barley* (boyl'd till it crack) ʒjss. *sweet Almonds blanch'd*, *white Poppy-seed*, A. ʒij. with water in which the Barley was boyled, make an Emulsion of ʒxxv. to which add *syrup of Diascordium* ʒjss. *Fennel*, *Rose* or *Plantane-water* ʒj. mix them, and give a little draught by short spaces. Or this which is stronger: Take *Plantane* and *Fennel water*, A. ʒjss. *Confectio Alkermes & de Hyacintho*, A. ʒjss. *Laudanum* gr. iij. *syrup of white Poppies* ʒj. mix them. Or this, Take *Diascordium* or *New Treacle* ʒjss. *Confectio de Hyacintho* ʒj mix for a Bole: Dose à ʒss ad ʒj. by spaces. Or, Take *Pilule de Cynoglossa* ʒj. *Laudanum* gr. iij. mix & make x Pills: Let the sick take often j. of these Pills, till the Vomiting is a little asswaged, and sleep comes on. If the Vomiting be so violent that Blood comes, through a Rupture or Corrosion of the Vessels of the Stomach or Guts, give this: Take *Plantane water* ʒij. *Cinnamon water*, *syrup of Myrtes*, A. ʒj. *distilled Vinegar* ʒjss. *red Coral prepared* ʒjss. *Dragons Blood* ʒjss. *Laudanum* gr. ij. mix them, of which

let the sick take often by Spoonfuls: it will cure most Ruptures of the Vessels, and soon stop the flux of Blood beyond Expectation. Lastly, the Vomiting being over, to compose the Stomach, you may give this: Take Mint, Fennel-Waters, A. ʒij. Syrup of Mint ʒjss. S. V. rectified, Or Aqua Vita Matthioli, Or Carminative spirit of Sylius ʒj. best spirit of Niter gr. xx. distilled Oyl of Mace gr. vj. Laudanum gr. iij. mix them, and give the mixture often by Spoonfuls. § 16. Fourthly, Loosness or Scouring. If it be Critical (viz. from a Conquest of Nature over the Morbifick matter) it ought not to be stoppt. If it be Symptomatical, it must be stoppt, but not presently, (unless it too much weakens the Patient) least the Vicious humors should regurgitate, and so fall upon some principal part. After a while it may be stoppt, and then it is to be done with a gentle astringent Purge, with Absterfive and strengthening Clysters. Rhubarb in this Case is the very chief thing: after the use of which for a while, you may exhibit some of the former mixtures in § 15. above: See the Cure of a Diarrhœa cap. 31. sect. 5. at large. § 17. Fifthly, Heat, Dryness, Roughness, and Blackness of the Tongue and Throat. Almond Milk, Or Emulsions of the greater cold seeds and Poppy-seeds in Barley water. are very good to hold in the Mouth. Or, Take Mucilage of Gum Tragacanth in Poppy water, with white Sugar q.s. make a Lohoch. Or Take Mucilage of Gum Tragacanth, mixed

of Eggs, A. ʒj. refined Sugar ʒjss. prepared Coral and Pearl, A. q.s. mix and make Troches: Or with a thin Rag, Nodules; which steep a little in Rose-water, and let the sick hold them in his Mouth. If the filth sticks to the Tongue, rub it off with a course Cloth dipt in a mixture of Poppy water and Vinegar. If the Tongue and Throat be very rough gargle with Diachysma frigidum, or Gargarismus ad Inflammationes: Or Emulsio Antiseptica. If the heat be Vehement, with great blackness of the Tongue, you may wash with Diachysma frigidum or Gargarismus de Prunella, or de Auricula Jude Myrsicabti, a part of which may also be swallowed. § 18. Sixthly, Leptophymia, or Swooning. The remedy of this we have exprest in sect. IV. § 8. 9. 10. 11. 12. 13. 14. 15. 16. 17. 18. above: as also in cap. 30. sect. 10. of this Book. However we commend Salt of Vipers, Tincture of Antimony, Tincture of the Salt of Tartar, Quintessences or Powers of Wormwood, Rosmary, Sage, Bawm, Angelica, Oranges, Limons, Citrons, Cloves, Mace, Nutmegs, Cinnamon, Tinctures of Musk and Ambergrise, Aqua Mirabilis, Imperialis, Cælestis Matthioli, spiritus & Aqua Angelica magni Composita, Aqua & spiritus Lumbricorum & Limacum, Aqua Bezoartica, & Cinnamomi Matthioli, Aqua Melisophilli magni Composita, &c. things admirable, being given in a due Dose and either alone, or with a proper Vehicle, according as they are either strong, or pleasant to the

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taft: this is admirable, *R^e spirit of Angelica the greater Composition* §iv. *Oyl of Cinnamon* 3℥s. mix and give a quarter or half a Spoonful at a time, either alone or in Sack. § 19. *Seventhly, Shortness of Breath.* In the Cure hereof we propose only two things, *first*, where a fixt and lixivate Salt abounds; *R^e Bawn water* ℥ij. *Oyl of Sulphur* or *Vitriol gut.* xxxvi. mix, and let the sick take it at four draughts, it will open the greatest Obstructions, if continued but for some days. *Secondly*, where an Acid Salt abounds: *R^e Poppy and Cinnamon water*, A. 3ij. *Syrup of Poppies and Purslane*, A. 3℥s. *spirit of sal Armoniack gut.* xxx. mix and give now and then a Spoonful, by this means the sick will have sudden and infallible relief: if there be a Cough withal, you may mix therewith our Pectoral Infusion either Simple or Compound, or else some Pectoral Syrup. § 20. *Eighthly, Headach, and want of Sleep.* Here you must use Revulsives, Repercussives, Derivers, Resolutives, Anodyns, and Narcoticks: *Repercussives* for this purpose are emollient and laxative Clysters, gentle Purgations, Cuppings, Washing of the Feet. *Repercussives* are Anacolemata, Unguents, Liniments, Vinegar of Roses. *Derivers* are Vescicatories, Issues, Setons, Errhines, Sternutatories, Masticatories. *Resolutives*, are Topicks which discuss, open the Pores, and cause a Breathing Sweat or Dew upon the Part, of what Nature are several Oyls, Oyntments and Plaisters. *Anodyns*, such are Fomentations made of

Rose Water and Rose Vinegar; A Cataplasm of fresh Roses, *Unguentum refrigerans Galeni*. And Lastly, if none of these former things will do any good, you must come to the use of *Narcoticks*, which are only to be used in extream necessity when all other things fail. *Invariably*, you must exhibit refrigerating Juleps and Emulsions, which may repress the heat, and allay the hot and sharp humours: here the *Emulso Antisebritica* is good: See cap. 29. *sect.* 1. 2. 3. and 5. where these things are all express'd more at large. But this Note, That none of these things be used if the *Crisis* be near, for so Nature would be disturbed in her Operations. *For want of Sleep*, lay a Cataplasm to the Soles of the Feet, made of fresh Gourds, leaves of Housleek, Lettice and such like beaten, so will the Coldness be communicated through the Nerves to the Brain. § 21. *Ninthly, Pains in the Loyns.* It is caused by much hot Blood fermenting in the *Vena Cava*: and is eased by cooling and emollient Clysters, Emulsions of the cold seeds, Poppy-seed, *sal Prunelle*; and by anointing the Loyns with *Unguentum Populeon*, alone or mixt with *Opium* dissolved in Oyl of Poppy or Henbane seeds by Expression; Or with an Oyntment made of Housleek, Purslane, Lettice, Nighthshade, Henbane, Camphir, Opium, &c. You may also foment with a mixture of Poppy water, Vinegar and Oyl of Roses and Camphir, which are to be applied actually cold

in Summer, and only warm at other times. § 22. *Tenthly, Disquietness, Tossings and Tumblings.* These are Cured by Purgings out the Bilious humors, which fret, and vex the Stomach, and other sensible parts; this is to be done by *Vomit*, if the Stomach be full and loaded, or loaths: Or by *Stool*, if Nature seems to affect that way: then also you may attract the humors downwards by *Clysters*, and give the sick cold drink, cooling Emulsions sweetned with Syrup of Poppies; and Lastly, at Night exhibit a small Dose of *Laudanum*. § 23. *Eleventhly, Sweating.* If it be Critical it ought not to be stop't: But if Symptomatical (which very much weakens the Patient) you must use all speedy means to repress it, for otherwise it will dissolve and melt the Body, and bring after it an *Hectick* or *Consumption*. This is done either by convenient purging by which means the humors are called inward, and so made more Central. Or, by *Exhibiting Inward Coolers*, chiefly Acids, as Oyls of Vitriol, Sulphur and Salt, which have a power to fix the Volatile Sulphur in Mans Body: Or by *Externals*, Where is required a cool Air, Or made so artificially by opening Windows, sprinkling cold Water, and strewing cool Herbs, on the Floor; cool Lodging, as on a Flock Bed or Quilt, with very thin Coverings: and application of cooling and astringent Medicaments to the Body of the sick, as Bathing with cold Water and Vinegar: cooling Epithems ap-

plied to the Heart, Liver and Belly, and often renewed, as also to the Back, Loyns, and Hypochonders: the sick may likewise go into a Bath made of a mixture of Water and Vinegar, in which astringent things had been beforehand Infused; provided that no Inflammation or Tumour be in the part above the short Ribs: by the Mouth give also things which cool and thicken, as Barley water, Emulsions of the four cold seeds, Restorative Broths boyled with cooling Herbs: Conserves of Roses, Lettice, Purslane, Wood-Sorrel, mixt with prepared Coral, Pearl, Terra sigillata, &c. § 24. *Twelfthly, Want of Appetite.* The Appetite in some is so dejected, that they can scarcely sup a little Broth, or receive any other sustenance, though never so small, which is caused by viscous Humours (chiefly tough, clammy Flegm) collected into the Stomach, or impacted into the fibrous wrinkles and foldings of the Coats thereof: Or from Wind. In the first Case, Vomiting with *Sal Vitrioli*, for several days is an admirable thing. I had a Noble young Lady my Patient, who after twelve Weeks sickness, eating almost nothing at all during that time, but Vomiting whatever she received, though never so little, was cured by taking the said *Sal Vitrioli* about five or six times: she Vomited about 16 or 18 pounds weight of viscous, tough, thick Flegm, the quantity can scarcely be imagined where it should lye: at last she Vomited green Cholera and the Flegm ceased, whereupon I ceased to give the

the Vomit : In the Intervals of each Vomit I gave her Wormwood Wine : and the Quintessence of Wormwood in Canary : her Stomach liked it, and desired it, I gave her it to satiety, after which she mended a pace, even beyond Imagination. Some advise to give an Infusion of Rhubarb and Tamarinds : and in the declination (if the Feaver be not strong) Hiera Picra dissolved in Decoction of Barley, Vetches, Wormwood, and other detergent things : Exhibiting also emollient and laxative Clysters as you see occasion, because they make Revulsion from the Stomach. You may give Oyl of Sulphur or juyce of Limons in Canary, for they profit much : so also Fruits, as Apples, Plums, Pears, Apricocks, Peaches, Cherries, Goosberries, Strawberries, Raspberries, Cucumers, Melons, &c. and in the declination, Syrup of Common or Roman Wormwood is excellent. As for their Food, let it be various, grateful, and pleasant, light of Digestion, and of good juyce ; let them eat but little and seldom, (for much and often eating destroys the Appetite even in us that are well ;) During the time that the sick has this abhorrence of Food, let them be strengthened with Nourishing Clysters, given twice or thrice a day. Lastly, let the sick continue the use of the Wormwood Wine, and Pills of Hiera Picra, till Health is recovered, for they powerfully cleanse the Stomach of such humors, as stick fast in the Wrinkles and Foldings thereof.

VI. Febris Quarrana Continua, The Continual Quartan Feaver.

§ 1. The Cure of this Feaver is much like the former, only it is more contumacious and stubborn : you must first prepare the humour with things which moisten, as Syrups of Violets, of Borrage, of Bugloss, of Succory, of Apples : Or with Decoctions of Borrage, Bugloss, Ceterach, Maidenhair, Fumitory, Hops, in the beginning : afterwards with Syrup of Fumitory, of Epithymum, of the five opening roots, Oxymel of Squills : Or with Decoction of Dodder, Scordium, Centaury. Barks of Capers, of the Ash-tree, and of Tamarisk : and to these Decoctions (if the matter be very much impacted, viscous and clammy) you may add Carduus Bened. and Germander. § 2. In these long lasting Feavers, caused by rebellious Obstructions hard to be cleared, Germander though bitter and succory, as also Endive and Dandelion may be boyled in Broths. And Montanus in his Counsels doth Cry up Germander and Succory, (to which we add Scordium) boyled in Broths, as admirable remedies for such as have a long Feaver with Obstructions. § 3. The matter being prepared, you may purge by Vomit, if the Stomach be sick, full or offended : but if Nature tends other ways with the Tincture of Sena, or Tinctura Cathartica Cloßæi, or Melanagoga or Catholica Grulingij, all which are most admirable things in this Feaver. § 4. After Purgation, you may exhibit Sudorificks and Diureticks,

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as also corroboratives, Drink, and a good Diet, such as we advised in the foregoing Section in the Cure of a Continual Tertian; so also Clysters, Topicks, and other the like things, to which we refer you. § 5. But in these longer lasting Feavers a more ample and liberal Diet is fitting; and Food made of the flesh of Chickens, Hens, Pullets, Capons, Partridges, Veal, Mutton, Or their juyces pressed out of them, or Jellys made of them, and such like: let their Food never be given in the time of the Exacerbation or Fit, but in the time of the abatement thereof. § 6. Let their chief Drink be Ptisan or Barley water, made of Barley cleansed from the Husks and boyled in fair Water to a consistency: this not strained is called Ptisan: but strained with pressing, is called Cream or Juyce of Barley. But the latter Physicians commonly add to it a little Liquorice, and so give it promiscuously in all Feavers. But a clear Decoction of Barley with Liquorice is more usual for Ordinary drink (the former may serve for Food) to which if roots of Grasse or Sorrel be added; the Water will look of a pleasant color like Wine: & for the Stomach sake, you may add Fennel and Parsley roots, seeds of Annis, and Corriander, or Cinnamon: this following you may use for Ordinary Drink: R. clear Ptisan of Barley and Liquorice ℥ij. Hartshorn calcined to whiteness §j. Q. essence of Mace or Nutmegs §i. white sugar candy ℥vi. mix them, shaking the Vessel before you pour forth to Drink.

VII. Kalmusew's, Febris Quo-

tidiana Intermittens, An Intermitting Quotidian, or every day Ague.

§ 1. First, the matter ought to be prepared, with such things as cut, or inside, attenuate, and open Obstructions, as Decoctions, Juyces, or Essences of Scordium, Germander, Centaury, Parietary, Endive, &c. in which you may dissolve ℥j or more (every Dose) of Salt of Tartar Vitriolate. § 2. And because the Stomach in this Ague is for the most part grievously afflicted, you ought to Vomit with Aurum Vita, Hercules Bovij, Extract of Esula: Or Water of Radishes and green Walnuts; Or with Vinum Benedictum, Or Aqua Benedicta Rulandi; which being taken two or three times, wonderfully break the force of the Disease. § 3. Then exhibit an emollient and laxative Clyster: after which purge with Phlegmagogues mixt with Mercurius dulcis, which repeat three four or five times as you see occasion. § 4. The Body being thus evacuated, you ought to sweat in Bed by giving Antimony Diaphoretick, Bezoar Minerale, Spiritus ex tribus, spirit of Tartar or Liquor Vitæ Anodynus, or Extractum Opij Anodynum, which two last may be given à gut. xvi. ad 3j, according to the Age and Strength of the Sick: the time of the Sweating must be so ordered that it may be in the Heighth, when the fit is coming; by which means it is profligated in two or three Sweats, nor have I ever known the two last Medicines to fail: you had best to give them three or four hours be-

before the coming of the fit, that the Sweat may be railed in due time : To these you may add the *Indian Bark*, of which is made the *Jesuits Powder*, Dose à ʒjad ʒj. § 5. The Paroxysm being over, it will be necessary to strengthen the Stomach with *Eletharium ad Tabidos*, *Elixir Proprietatis*, Tincture or Powers of *Wormwood*, given in Canary : Outwardly you may apply to the Stomach and Heart a Cataplasm of Mint and *Wormwood*. § 6. For Topicks to Cure this Disease we commend *Cataplasma Antifebrile Nostrum*, as also *Emplastrum Araneorum*, both which are incomparable good things, and have been often times proved. § 7. *Zacutus Lusitanus* proposes two things by which he saith, He has cured most stubborn Quotidians. The first is this : R *Camomil flowers* P. iij. *Tops of Roman Wormwood* P. ij. boyl all in Water lbij to lbjss. strain, and sweeten with Sugar ʒiv. Dose ʒv or vj. every Morning. The Author of this Work has cured many Quotidians with only a Simple (but strong) Decoction of *Camomil*; as also with the juyce thereof expressed being drunk ad ʒiv or vj. The second is a strong Decoction of *China an Guaiacum*, drunk for twenty five days together: but this is to be observed, That it ought not to be given in hot Countries, nor to such as are of a hot and dry Constitution, but to such as are Phlegmatick, cold and moist.

VIII. Terni ☉, *Febris Tertianæ Intermittens*, An Intermittent Tertian, or Third day Ague.

§ 1. The Cure is performed, first by evacuating the first passages with Lenitives or emollient and laxative Clysters, given always before the beginning of the fit. They may be made of an emollient and cooling Decoction, with *Cassia*, *Catholicon*, *Diaprunum* simple and laxative. § 2. Secondly, by Vomit, if the matter tends to the Stomach, and the sick is troubled with Heart burnings, Stomach sickness, and desire to Vomit : but so as the Humors be not thereby drawn out of the Veins into the first passages; for as much as all intermitting Feavers, are caused of evil humours contained in the Stomach, Mesentery, and cavity of the Liver : And here as *Fernelius* has well observed, That such matter is brought away by Vomit, as cannot be moved by purging Medicines given very many times : for this purpose you may Vomit with *Sal Vitrioli*, Broom, Water of *Pisimires*, &c. but if gentle Vomits will not do, you must proceed to such as are stronger, as specially *Asarum* root, the Powder whereof you may give ad ʒss ʒij or ʒj. in Broth : Or a Decoction of ʒiij. of the said Root in Chick Broth: But the *Aqua Benedicta Rulandi* made of *Crocus Metallorum* is commended above all, if given by a prudent Physician. § 3. By the Administration of cooling Alteratives, which may be also abster-sive and humecting, as *Taraxacum* or Dandelion, Sorrel, Barley, Succory, *Cremor Tartari*, Tartar Vitriolate, Syrup of juyce of Citrons, Oyls of Salt, Sulphur, and Vitriol. *Forestus* commends this

this, *℞ spring water ℥ij. Cinna-
mon bruised ʒss. infuse twelve
hours warm, strain, and sweeten with
white sugar ʒijj. Cremor Tartari* is
thought to be profitable in all
sorts of Agues, because it opens
Obstructions, cleanses power-
fully, and cool withal. Oyl of
Sulphur may be given à gut. x.
ad xx. with Purslane water in
the height of the fit, for it doth
powerfully extinguish the heat
of the Feaver, and if the humor
is thin, drives the same out by
Sweat, so that there remains no
matter for a new fit. Or, Take
Salt of Wormwood ʒss. spirit of sul-
phur gut. xx. Carduus water ʒiv.
mix and give the sick at the
coming of the fit, covering them
with many Cloths. § 4. Fourthly,
By Purgation downwards, which is
to be done for the most part on the
well day: And sometimes on the fit
day, if the matter it self inclines to
goe away by Stool. Authors com-
mend Rhubarb, and Syrup of Suc-
cory with Rhubarb, Riverius
saith, They ought to be the same
which have been propounded in
continual Feavers, and to be gi-
ven on the days of Intermision
in the Morning: *Sena* is of good
use in this Cure, so also Syrup of
Roses, and Syrup of Roses with
Agarick if Flegm abound: if the
sick is strong, you may give *Dia-
prunum solutivum*, *Electuarium de
succo Rosarum*, *Diaphœnicon*, &c.
Having purged once or twice,
you may cease and give again
cooling Juleps, and such things
as open and cleanse for a while;
which being finished, Catharticks
are to be exhibited again, or an
Emetick according as you per-

ceive nature to encline; and if
signs of Concoction appear, the
Ague is happily cured by a Vo-
mit, as *Rulandus* in his Centuries
of Cures has many experiments:
Some give *Aqua Benedicta* ʒi.
with Infusion of half an ounce of
Sena, and so it works both ways,
but more by Stool than by Vo-
mit: Others exhibit *Cambogia*,
others *Scammony* or *Pilula ex duo-
bus* with *Mercurius dulcis*, which
do potently evacuate and erradi-
cate these kinds of Feavers, but
they ought to be given to strong
people. § 5. Fifthly, by sweating,
which is caused by sudorificks, as
Salts of Wormwood, of Centory, of
Carduus, Hartshorn prepared, Pearl
prepared, or this following with
which *Deckers* saith, He has
cured many Quotidian and Quar-
tan Agues, but chiefly Tertians,
with the third, second, yea first
exhibition, a Purge sometimes
preceeding it: *℞ Carduus water
ʒij. Treacle water ʒij. Salt of
Wormwood ʒss. spirit of Sal Armo-
niack gut. xij. Syrup of wild Poppies
ʒijj. mix for a draught.* If the
Disease seems stubborn, and
keeps its hold, the Face pale and
swoln, and the Leggs also Swell
towards Night, there is also
some great Obstruction of the
Liver; and in this Case your
Sudorificks ought to be *specifick*
Antifebriticks, and openers of the
Obstructions of the Liver; such
as the *Cortex Peruanus* (of which
the *ʒ-suits* Powder is made) given
à ʒj ad ʒj. *Liquor Vitæ Anodynus*
given à gut. xx. ad ʒj. accor-
ding to Age and Strength,
Conf. ʒia Anodyna, *Laudanum*, all
which may be given two or three
hours

hours before the fit. Galen ad *Glauconem lib. 1. cap. 9.* exceedingly commends *Wormwood*: as also *Centory*, the last of which for its singular Virrues it has in curing Agues, is called *Febrisfuga* or the the *Ague-queller*: to these add *Carduus*, roots of *Dictamnus*, *Pimpernel*, *Tormentil*, of which Decoctions, Infusions, Pouders and the like are made, to be given for many days together before the fit: Venice Treacle ad ʒj. or Mithridate ʒjss. is ordinarily given in White Wine before the fit, three times one after another: Some dissolve in Plantane water, and count it a specifick. If any of the foregoing things may be thought too hot, you may exhibit them in some cooling Julep, or make a Compound after this manner: Take roots of *Grass*, *Succory*, *Asparagus*, A. ʒj. leaves of *Agrimony*, *Sorrel*, *Succory*, *Endive*, A. Mj. *Wormwood* and *Centaury*, A. Mj. Water q. s. boyl to a pint, strain, and sweeten with syrup of *Lemons* ʒiij. Let it be taken at three times in the Morning. Some affirm, That the juyce of *Plantane* clarified and drunk to the quantity of ʒiv. an hour before the fit, doth Cure a *Tertian Ague*. Or this: R juyce of *Plantane* ʒiv. *Vinegar of Roses* ʒss. *Saffron* gr. iij. mix and give it two hours before the fit: *Manardus* prefers a Decoction of *Camomil* or its distilled water given ad ʒiv. two hours before the fit: However whether *Manardus* had said it or no, We know the Juyce or Decoction thereof to be a specifick in curing all sorts of Agues,

whether *Quotidian*, *Tertian*, or *Quartan*. *Cinkfoil* or five leaved *Grass*, is counted a great specifick, being given for several days, viz. the juyce or Decoction or Pouders of both Leaves and Roots. This following is also approved: R *Cortex Guajaci*, *Bark of Ash*, A. ʒj. *Extracts of the Roots of Angelica and Gentian*, *Antimony Diaphoretick*, *Volatile Sal Armoniack*, A. ʒj. *Myrrh* ʒij. mix and make a Pouders, for eight Doses, to be given in a convenient Vehicle. § 6. *Sixthly*, by strengthening the Liver and Stomach; which is done with the Quintessence of *Wormwood* given in *Canary*: Salt of *Wormwood* dissolved in Spirit of Niter, and again coagulated into Crystals, given ad ʒj. Troches of *Rhubarb* or of *Wormwood* given ad ʒj in Decoction of *Grass* and *Parsly* Roots, *Barley*, and *Succory*, *Borrage* and *Bugloss*, for many days: *Elixir Proprietatis* given a gut. xx. ad xxx. in *Parsly* water sweetened with *Sugar-candy*: *Pills of Zechius* which not only strengthen the Viscera, and take away their distempers, but also effectually open Obstructions of the Liver, thus made, R Troches of *Rhubarb*, of *Eupatorium*, of *Wormwood*, A. ʒss. *Diarhodon Abbatis* ʒj. Syrup of *Wormwood* q. s. make a Mass of Pills: Dose ʒj. every Morning fasting. Outwardly anoint the Stomach with this, R Oyls of *Wormwood*, *Quinces*, *Nard*, A. ʒss. *Gallia Moschata* ʒj. *White Wax* q. s. mix for a Liniment and anoint, over which lay a Cerate made of equal parts of *Ceratum Santalinum*

linum Mesue, and Stomachicum Galeni. § 7. *Seventhly, By the application of Topicks. The Feaverish heat is to be allayed by cooling Epithems, applyed to the Heart and Liver, as we advised, in Continual Feavers, but only to be laid on, in the height of the hot fit, or rather when it first begins to abate: the Liver and Loyns you may anoint with Unguentum Rosaceum, or Refrigerans Galeni: and in the end of the fit you may exhibit emollient and cooling Clysters, that thereby the superfluity of humours may be taken away by little and little: Moreover in this Case, great things are done by a Blood-warm Bath of Water, to be used on the well day without Sweating; for thereby the hot and dry distemper of the Bowels is taken away. R. leaves of Hyssop, cut small, A. P. j. Myrrh ʒij. Mace, Nutmegs, Cloves, Cinnamon, A. ʒss. Venice Turpentine, juyce of Tansy, A. ʒj. mix, and spread them on a Rose Cake fryed with Canary, which apply hot to the Stomach. Or this, R. Cloves, Nutmeg, Cinnamon, dryed Wormwood, Mint, A. ʒiiij. Myrrh, Ginger, Corriander-seed, A. ʒij. make all a Pouder, which mixt with liquid Pitch or Tar, and make a Cerate for the Stomach. The following are to be applyed to the Wrists, as Cataplasma Antisebrile Schroderi, Cataplasma febrile Myrsichti, Cataplasma Antisebrile Nostrum: The Pouder of a dryed Manchet beaten with green Sage, the White of an Egg, and a little Vinegar: A Cataplasme made of whole Oranges beaten together and made*

to a Consistency with fine Pouders of Pepper and Ginger: Or Mouse-ear beaten with Salt and Vinegar, or Shephards Purse in like manner: Or this; R. leaves of Plantane, Celandine, A. M. l. Cobwebs, Nettle-seed, Soot, Salt, A. ʒj. the strongest Vinegar q. s. mix and make a Cataplasme, which apply to the Wrist a little before the fit, to be repeated 4 times. Platerus saith, That he has often had success by applyng to the Wrists the inner Bark of the Nut-tree steeped in Vinegar. Some commend Wild Tawny or Agrimony, beaten with Salt and Vinegar, and applyed to the Wrists and Soles of the Feet, in the fit: Also a Cataplasme of Bryony roots, Black Hellebor, Bay Salt, White Pepper, Saffron, and Figs, is of good estimation. § 8. *The Cure of the Bastard Tetan.* It differs not much from the former: instead of the Clysters at § 1. above, you may make them of an emollient Decoction, and cutting Medicaments, dissolving therein Honey of Roses, Diaphanicon, and such like: for Purges you may use Syrupus de spina Cervina, Agarick, Resina Fallappæ, Resina Scammonij, Sena, Catholicon, Diaphanicon, &c. making a mixtion according to the Constitution, and diversity of humors: as, R. Electuarium Diacarthamum, Diaprunum Solutivum, A. ʒss. Fallap ʒj. Tartar Vitriolate ʒj. mix them, of which give the quantity of a large Nutmeg in the Morning fasting, in the Intermissive day: Or R. Cremor Tartari, Salt of Scordium, A. gr. jx. Tartar Vitriolate, Diapre-

dium;

Alum, A. gr. vj. make a Powder for the Intermissive day. Or, Take Salt of *Amber* ℥j. *Tartar Vitriolate*, *Diagredium*, A. gr. vij. make a Powder. If it be a thin, hot, and dry Constitution, strong Purgers, and things heating do much hurt. For a Sudorifick, you may exhibit this : R *Salts of Carduus*, of *Wormwood*, of *Self-heal*, A. ℥ss. *Bezoar Mineral* gr. vj. *Sugar of Pearls* ℥ij. mix for a Powder, to be given before the fit in Rhenish Wine, which renew three or four times. *Alum* ℥j. or *Oleum Piperis* gut. iv or v. or *Spirit of sal Armoniac* gut. vij ad xij. in Centaury-water, wonderfully provoke Sweat, and oftentimes Cure the Disease alone.

IX. Τεταρταῖα, Febris Quartana Intermittens, An Intermitting Quartan, or Fourth day Ague.

§ 1. You ought first to prepare the humors, that there may be a due Colliion and Disposition of the peccant matter ; this is to be done with such things as respect Melancholy ; such are Maidenhair, Ceterach, roots of Eryngo, Decoction of Turneps, and other things mentioned in cap. 29. sect. 16. § 2. cap. 31. sect. 13. § 2. to which we shall here refer you. And because the humour is cold, dry, thick, and earthy, you must use Medicines which heat, moisten, and attenuate ; as Broth of Turneps seasoned with Sugar and Butter, *Decoctum Aperitivum majus & minus*. Or this : Take Waters of Parsley, of Fennel, Treacle water, A. ℥ij. syrup of *Carduus*, of Limons, A. ℥vj. Volatile Salt of

Amber ℥j. mix them. Or this, R *Fumitory-water* ℥iij. *Sal Armoniac Volatile* ℥j. *Antimony Diaphoretick* ℥ss. syrup of Fennel ℥j. mix them. Or this, Take *Carduus* and Fennel water, A. ℥ij. Treacle water, Water of Earth-worms Compound, A. ℥ss. syrup of Succory ℥i. mix them. Or this, R *Roots of Asparagus*, *Bruscus*, *Liquorice*, *Succory*, *Bugloss*, (steeped in Wine,) A. ℥j. *Bark of Tamarisk* ℥ss. *leaves of Borrage*, *Bugloss*, *Ceterach*, *Maidenbair*, *Fumitory*, *Germander*, *Ground Pine*, or *Gout-Ivy*, A. M. j. the three Cordial flowers, A. P. i. Water q. s. boyl all to thjs. strain, and sweeten with syrupus de quinque radicibus ℥iv. give it at four times, four Mornings together ; this by reason of the contumaciousness of the matter, ought to be continued many days : and indeed in the days between Purgations. § 2. During this Preparation of the matter, you ought to prepare the Bowels by a cleansing Clyster thus made : Take *Decoctum Carminativum* thjs. *Catholicon*, *Sugar*, A. ℥j. *Oyl of Camomil* ℥iij. *Vinum Benedictum* ℥jss. mix them : Or you may exhibit *Enema Carminativum* *Mynsichti*, or *Emolliens Schroderi*, both which are of good use in this Case. § 3. If by the Indications of the Stomach you find Nature enclines to Vomit, and that there is a fullness, heaviness, and loathing, you must exhibit a proper Vomit, which by the consent of most Physicians, ought to be given in the beginning of the Ague fit, because Nature is then most disposed to that Evacuation. What Vomits are proper we have be-

before declared *sect. 2. § 3. sect. 3. § 2. 5. sect. 5. § 2. sect. 7. § 2. sect. 8. § 2.* But in a Quartan Ague, Physicians prefer *Asarum* root and *Viæ*, before the rest: The *Asarum* may be given ad \mathfrak{z} j in Powder in White Wine, and three or four times repeated, after Vomiting give Venice Treacle \mathfrak{z} j in a glals of Wine before the next fit. § 4. After Vomiting you ought again to take the Preparatives at § 1. and over Night exhibiting one of the aforementioned Clysters you may the next Morning give a gentle Purge, as Decoctum Senæ Gereonis, Decoctum Amarum, Decoctum Fumarie Compositum, Aperitivum minus, Or this following; \mathfrak{R} Sena \mathfrak{z} ss. Anniseeds \mathfrak{z} j. Liquorice \mathfrak{z} ij. Borrage, Fumitory, A. Mj. Water q. s. boyl all to \mathfrak{z} ij or iv. strain, and add, Manna, syrup of Roses, A. \mathfrak{z} j. you ought only to use gentle Medicines at first, least stronger make a simple or single Quartan, a double, or continual Feaver; afterwards (when there is a greater Concoction of the Humors) you may use stronger, and so till you come to the strongest. Sylvius de le Boe, prescribes this: \mathfrak{R} Pilulæ fetidæ \mathfrak{z} ss. Troches Albandal, Mercurius dulcis, A. gr. v. Oyl of Amber gut. ij. mix and make 5 gilded Pills to be taken 4 or 5 hours before the fit, which will purge gently. Deckers has this: \mathfrak{R} Roots of Polypody, Parsley, A. \mathfrak{z} ss. Tops of Centory the less P. j. leaves of choise Sena \mathfrak{z} ij. Rhubarb \mathfrak{z} j. Root of black Hellebor, crude Tartar, A. \mathfrak{z} ss. Fennel-seed \mathfrak{z} ij. Mace \mathfrak{z} j. boyl in Water q. s. strain, in \mathfrak{z} iv. thereof dis-

solve Manna \mathfrak{z} ss. for a draught. But if the Contumacy of the humours threaten the Disease to be long; we must come to Medicaments which do more powerfully cut and attenuate, such as this following: \mathfrak{R} the frow opening roots, A. \mathfrak{z} j. Elecampane, Gentian, Zedoary, *Asarum* roots, A. \mathfrak{z} ss. Germander, Scordium, Wormwood, Centaury, Hops, Agrimony, Ceterach, succory, A. Mj. Liquorice, Raisins stoned, A. \mathfrak{z} j. Agarick newly Trochiscated \mathfrak{z} ij. Sena \mathfrak{z} ij. Epithymum \mathfrak{z} j. Ginger, Cloves, A. \mathfrak{z} j. boyl all in Water q. s. to \mathfrak{z} ss. strain, and add Syrup of Succory with Rhubarb \mathfrak{z} ij. salts of Wormwood, Centaury, and Tamarisk, A. \mathfrak{z} j. make an Apozem for five Doles to be taken in the Morning. But because that this Disease is stubborn; and the sick is forced to take many Medicines; you ought to exhibit them under variety of forms that they may not loath, and reject them. The former Apozem may be made into a Syrup with its double weight of Sugar. For this Purpose serve the Pilule Tartaræ Quercetani, afterwards the Extract of Black Hellebor; at last the Pilule de Sagapeno Quercetani; his Pilule de Ammoniac & de Euphorbio, are excellent, so also Pilule Tartaræ Bonitij, Febrisuga Scheferi, Polychrestia Clossæi, Gummosæ Clossæi, Melanogoga Mynsichti, Holagogæ, & Tinctura Cathartica Clossæi, Catholica, Phlegmagoga & Melanogoga Grulingij. These purging Medicines ought to be given the day before the fit, because the sick is stronger then, than at another

ther time: also in the intervals of purging, Clysters ought frequently to be given, that Nature may be accustomed to expel the Noxious humor downwards, that so (tho by little and little) the morbisick matter contained in the *Meſeraick Veins* may be carried off. And in a *Long Quartan*, you are not always to use the same Medicines, least they become habitual, and so do nothing, or the sick be weary of them. § 5. If the sick has been accustomed to such an Evacuation, it would be good to provoke a Flux of the Hemorrhoids, by which many have been cured. For the Hemorrhoidal Veins are branches of the *Meſeraick Veins*, in which the matter of the Disease is contained; when they are opened, they evacuate the immediate cause of this Disease: so that if a Flux of this kind happens to such as have been accustomed, it ought not to be stoppt, and if it be too sparing, it ought to be provoked; so also if Nature seem to encline that way, known by itching in the Fundament and some drops of Blood) in this case it is done by the application of Leeches. § 6. Sweating is the next thing in order to this Cure. It may be done with *Athridate*, Venice Treacle, Our New London Treacle, *Confectio Anodyna*, *Laudanum Noſtrum* & *Tracellſi*, Antimony Diaphoretick, *Bezoar minerale*, *Spiritus ex tribus*, Volatile Sal Armoniack, given ad gr. x. or xij. in Succory water before the Fit. But this is to be observed, that you ought not to Sweat, till the chief of the

Morbisick matter is carried off by the former evacuations, and that there are apparent signs of Concoction; then Sudorificks are of force, and do not only discurr the reliques of this Disease, but correct the Distemper of the Bowels, amend the ill habit of the Body, and strengthen the Liver, Spleen and Stomach. Moreover all Diaphoreticks ought to be given, one, two, three or four hours before the Fit, according to the time that they will be in full Operation, and to be repeated three, four or five several times; by this means if the morbisick matter be little and thin, the Disease is perfectly taken away. Among other Diaphoreticks, we commend Our *Liquor Vitæ Anodynus*, given à gut. xx. ad lx. in choise Canary, Or *Extractum Opij Anodynum*, in the same Dose and Vehicle: some commend the roots *China* and *Sarsa*, whose first and second Decoctions being given twenty or thirty days together, doth sometimes Cure continuations *Quartans*. To these add *Tinctura Diaphoretica Paracellſi*, *Pilule diaphoreticæ Cloſſei*, Spirit of Guaiacum, and Venice Treacle, which *Riverius* saith, (though not truly) chalengeth the first place; it may be given an hour or two before the Fit, ad ʒj. either in Wine, or Decoction of *Germander*. And for the same purpose you may make Pills of the Extract of *Germander* mixt with Salt of *Tamarisk*. § 7. After Sweating, you ought to strengthen the Viſcera, chiefly the Spleen, because that part is always affected

in this Disease; and therefore such Medicines as are ordinarily proposed for Obstructions of the Spleen are good here: See Cap. 31. Sect. 9. and 11. where you may have larger satisfaction; however these things following are specially approved. *R Rhenish Wine* ℥iij. roots of Elecampane, ℥iij. Zedoary, Tops of Wormwood, Germanander, Centaury, Scordium dried, A. ℥j. Bark of Caper-roots ℥ss. infuse in B. M. for four days: keep it without straining, and give ℥iij. in a morning fasting. Or, *R Conserve of Elecampane and Angelica roots, of leaves of Wormwood, Centaury, Scordium and Germanander, A. ℥j. preserved Citron and Orange peels, Electuarium ad Tabidos, Confectio Alkermes, A. ℥vj. preserved Myrobalans, N^o. iij. Sales of Wormwood, Tamarisk, Germanander and Flowers of Sal Armoniack, Saffron, A. ℥iij. with Syrup of preserved Nutmegs, make an Electuary: Dose the quantity of a Chestnut every morning fasting; or if they take any other Medicine in the morning, then two hours before Supper. Steel prepared is of singular use for this purpose, and indeed in all Chronick and intermitting Feavers, because it powerfully opens concrementious Obstructions. It is the Opinion of some Physicians, that this Ague is never found, but in a Scorbutick Body, and therefore not possible to be cured unless Antiscorbuticks be joyned with Antifebriicks, which however whether always true or not, yet where there is an apparent Scorbute, it may be good to joyn the use of Antiscorbuticks with all. § 8. These things fol-*

lowing are accounted as Specificke,
R Camphir ℥j. *Ginger* ℥ij. *Sugar Candy* ℥iij. make a powder, and give ℥j. in warm water: However some affirm that Camphir does no good against an Ague, inwardly taken, but outwardly worn as an Amulet, it is of great force. Seeds of wild Rue given before the fit in White Wine are accounted singular. So is this, *R S. V. ℥iij. Gentian, Zedoary, Bay-berries husked, Opium, A. ℥j. digest the species first twenty days, then dissolve the Opium in the Spirit, digest twenty days more, decant, and keep it for use. Dose à gut. xx. ad lx. two or three hours before the fit, in Canary. Juice of Camomile taken to ℥iij. is powerful; Or Saffron in powder given ad gr. x. in white Wine before the fit: Or, R Green Plantane leaves, M. j. Sorrel M^{ss}. Vinegar, Venice Treacle, A ℥iij. distil, of which liquor give ℥iij. before the fit; Or, R Sena, Polopody, Time, Epithymum, A. ℥j. Borrage Flowers P. j. make a Decoction to ℥iij. which give an hour before the fit: Or, R Sena ℥iij. Turbith ℥j. Cinnamon ℥ss. Saffron Ginger, gr. x. Sugar. ℥v. make a powder for three Doses; give one Dose before the fit in white Wine: Or Take the Pills de Sagapeno Quercetani, (which indeed are the Pills of Camillus) as we have directed in Our Pharmac. after which anoint the Back bone with Treacle, Aqua Vitæ, and Oil of Bays mixed together, which do often, by which means the cold fit will be mitigated, you may anoint it with other hot things and do it an hour before the fit, by the fire side, and presently the sick*

sick is to be conveyed to a hot Bed, and to sweate thereupon. To these may be added, *sal Armoniac* seven times sublimed; *Crude Alum* ad ℥j. *pouder of Vipers* ad ℥j or ʒls. before the fit in Spirit of Wormwood, An Hares Heart prepared as Fox Lungs; Oyl of Myrrh a gut. iv. ad viij. before the fit: the Cortex Peruanus of which is made the Jesuits Powder, to be given à ℥j ad ʒj. in Decoctum Amaranth which is a famous thing. § 9. For Topicks, the things mentioned in the former Section may take place here; to which you may add, Onions, Garlick, Crowfoot and such like: the latter of which Sennerthus saith, That a certain Citizen being perswaded by an old Woman to apply it to his Wrist, had a puch raised on his Arm, by which he was freed from his Disease. Rondeletius used the following with good success: R Elder-leaves, Sage, Doves-foot, Rue, A. Mfs. Marigold leaves P. j. Sal. M. j. wine ʒjls. beat and apply them to the Wrist before the fit: Or, R Nettle roots, Camomil, A. M. j. Pepper in Powder ʒij. beat all into a Cataplasme, which moisten with a little Vinegar, and apply as aforesaid. Also after sufficient evacuation a Bath of warm water in the days of Intermission, is of singular use. § 10. The Cure of a Bastard Quartan, proceeding from a rust humors or black or burnt Choller. It differs little from the Cure of a Tertian in the former Section, save, you are to mix with the things there specified, all those things (especially the more cool and temperate sort) which we

have advised against the Obstruction of the Spleen: and for a Vomitory, *Asarum* is the Principal, to be often repeated; and of special use is a Bath of warm water.

X. A Compound Quotidian Ague, Or double Quotidian.

§ 1. As the Cause of this Disease is the same with a simple Quotidian, save it is stronger and reduplicate; so the Cure ought to be the same, but the Medicaments ought to be made double in power. § 2. But whereas by reason of its double return in the space of twenty four hours, without any shivering fit, it draws near to a continual Quotidian. Some respect ought to be had to that, wherein, if it draws near to a continual Quotidian, there being only a remission between the two fits; not an apparent Intermission; the Cure of the continual Quotidian is rather to be imitated and followed. § 3. But if there be an apparent Intermission, and it considerable, you are to propose to your self the method of the Intermitting Quotidian, with the caution aforesaid. § 4. If the space between the fits seems doubtful whether it may be termed an Intermission or Remission, the Medicines proper to each ought to be used in an equal Proportion. § 5. But the general Method in all Cases is this, that (because the Acid and fixed Salts abound in an equality,) you depress the Acid Salt, that the fixed may so exceed, as to reduce the Ague to the state of a single Quotidian; after the Method of which, you may then exactly Cure it.

XI. A Compound Tertian Ague, viz.

M m m 2

Se-

Semi-Tertian, and Double Tertian.

§ 1. *The Semi-Tertian is a continual burning Fever, and therefore the Cure ought to be taken from both the general and particular Method laid down in Sect. III. a-foregoing, and this whether it be exquisite or spurious, since that Method is common to all putrid Fevers.* § 2. *But in the spurious if Choller chiefly prevails, you must use those things which depress Choller, among which Aloes and Rhubarb are said to be chief; and of Altering Simples, those which are the cooler as also Salts of Tartar, &, and Wormwood.*

§ 3. *If Flegm chiefly prevails, you must use things which purge it, the chief of which are Resin of Jallap, and of Scammony, Agarick, which bears away the Bell in this Case: of altering Simples, the more temperate: of Vomits Sal Pitrioli: of Salts, such as are Volatile, as Volatile Salts and Flowers of Sal Armoniack, Ens Veneris, Salts of Amber, Hartshorn, &c.*

§ 4. *But in the exquisite Semi-Tertian, where the humours are both equal, you ought to use an equality in the remedies proper to each.* § 5. *A double Tertian is an Intermitting Fever or Ague, wherein the Salts abounding both acid and fixed are equal: The Cure is the same with a Tertian Ague, save as the strength of the Cause is double, so the Medicaments ought to be the more powerful, and withal you ought to depress the Acid Salt.*

In this Ague, it is a hard matter to get a convenient time to give a Purge, because oftentimes not above three or four hours do fall between two fits; and sometimes

the fits are so long, that the one begins before the other is ended, which makes them to be called *Febres subintrantes*; incroaching or interfeering Fevers: this occasion requires the utmost diligence of the Physician, and therefore the purging Medicine must be given in the beginning of the declination, as soon as it begins never so little to remit. But in the Double Tertian not incroaching, (wherein the fits keep a due space of time between;) called *Febbris Coalterna*, the Medicament must be given in the end of the fit; so that the working of the Physick may be over, before the next fit comes. In both these Cases the sick ought to drink Broth three hours after the Medicament, yet so that there be remaining three hours (if it may be) for the Broth taking, before the next fit begins; so that the Purge ought to be given six hours at least (if possible) before the interitum of the succeeding Paroxysm.

XII. *A Compound Quartan Ague, Or Double Quartan.*

§ 1. *The Cure of this Ague is the same with the Cure of a single Quartan, and proceeds from the same cause; save in this, the force of the cause is doubled by the great superabundance of the Acid and fixed Salts in an equality.* § 2. *For this cause therefore you must principally aim to depress the Acid Salt, that the fixed may exceed, and so the Fever be reduced to the state of a single Quartan; after whose Method then it may be exactly cured, by Sect. IX. a foregoing.* § 3. *The same observe in a Treble Quartan.*

XIII.

XIII. *Ἑκτική πυρετός* Febris Hectica, *The simple Hectick Fever.*

§ 1. *A Hectick is sometimes primary or alone, and sometimes complicated with a putrid Fever, either continual or intermitting, or following some other Disease.* § 2. *If a simple Hectick be alone it is cured chiefly by things Humecting and Refrigerating; as, of Internals, Flowers of Violets, Borrage, Bugloss, the four cold seeds, milk of Pearls, of Corals, of Barley, and other gentle things: Of Externals, Baths of fresh water, of Milk, of Oyl Olive, Unctions of the Back-bone with Oyls of Roses, of Violets, of Sweet Almonds, or with Unguentum Populeon. The Diet may be Women's Breast Milk, Asses Milk, or Cows Milk warm, which is now chiefly in Use; (but Milk ought not to be taken if a putrid Fever be joyned:)* To these add Almond Milk, Pine Kernels, Pistachioes, &c. And for Drink fair water, in which so much Salt of Tartar is dissolved, as may only make it sweet like Milk. § 3. *If it be joyned with a continual putrid, it is difficultly known, the dry heat remains after the declination or end of the whole Fever, the Body is more extenuated, and the Urine is fatty and oily.* § 4. *If it is joyned with an Intermitting putrid; then the greatest part of the heat remains, the least is only come in to act: The fit being finished, the places of the Arteries grows hot, the other parts are temperate; the Pulse looses not its frequency and swiftness, and the Patients meat*

does not increase strength. § 5. *In these two last cases, the putrid Fever is first to be cured, as we have taught in some of the former Sections, then the Hectick, which ought however in the mean while not to be neglected. In both these cases the Aqua Mirabilis Ferdinandi, is much approved off, it is thus made, R the Blood of a young Hog newly stuck, ℥ij. Venice Turpentine ℥ij. Crums of Bread, scraped Liguorice, A. ℥ss. Currans M.v. Pine Apple Kernels cleansed M. iij. Tobacco leaves M. ij. Figgs N° 50. Orrice root ℥ij. mix and distil with a glass Alembick: Dose ℥ij. with a little Sugar.* § 6. *If it be not primary but proceeds from some other Disease, as of the Lungs, Liver, Spleen, Reins, Womb, Bladder, or other parts, either inflamed, apostemated, ulcerated, corrupted, or possessed with some other vehement Malady preceeding it, you must then direct the Cure to that Disease, that that may be taken away; for if the Cause remains, the effects will not cease: but with things proper to the Disease causing, it will be good to mix things proper for an Hectick, viz. such as humect, refrigerate, and restore.*

XIV. *Μαρασμός*, Hectica Marasmodes, *A Hectick with a Consumption.*

§ 1. *Although the Cure of this Disease little differs from the cure of a Consumption, yet it differs so much as that here is a Fever to be considered, with a Tabes, and from whence the principal Indications of Cure arise, which are two-fold, viz. first, the cooling and moistning of the parts, principally of the Heart*

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and Liver; and then of the whole Body: Secondly, restauration of the radical moisture, and fleshy substance of the Body. § 2. If the Marasmodies is not joyned with a putrid Feaver, you must only cool and moisten; as, R^x waters of Purslane, Lettice, Succory, A. ℥iiij. Syrup of Purslane ℥iij. Salt of Wormwood ℥j. Quintessence of Nutmegs ℥ss. mix for three Doses to be taken several times in the day, and for many days together. Or this, R^x Waters of Succory, Endive, Poppy, A. ℥iiij. Syrups of Poppy and Succory, A. ℥jss. Sal prunellæ ℥j. Quintessence or Powers of Mace or Cinnamon ℥vj. mix for four Doses. Or, R^x Barly or Chicken Broth, ℥xij. Syrup of Lettice and Poppies, A. ℥jss. Salt of Wormwood ℥j. Quintessence or Powers of Saffrass or Sage ℥ss. mix for three Doses, you may do the like with Decoctions of China or Sarsa, or with Milk of Almonds or Barley, and if you would cool more powerfully, you may to every Dose of the Julep or Emulsion add Sal prunellæ ℥ij. or ℥j. but observe this Caution in using cooling things, that you use the more powerful by degrees, and not of a sudden, least they extinguish the native heat of the sick; but things of an Humedding nature you may use more liberally: R^x Sweet Almonds blanched ℥j. infuse them in cold water: the four greater cold seeds, Poppy seeds, A. ℥ij. beat all together in a Marble Mortar, pouring on by little and little, a pint and half of Fountain water (in which so much Salt of Tartar is dissolved, as may make it sweet like

Milk:) in the strained liquor dissolve white Sugar Candy ℥j. so have you Almond Milk for three or four Doses. § 3. But if the Marasmodies is joyned with a putrid Feaver, vomiting or purging must goe before, that the first passages may be empried of the Morbifick cause, all which you may do by the rules deliveried in some of the foregoing Sections, according as the Marasmodies proceeds from a continual or intermitting Feaver: to which we refer you, however you may safely purge with Cassia, Manna, or Syrup of Roses; and if the strength is not much impaired, with Infusion of Rhubarb, Sena, Decoction of Prunes, Tamarinds, Myrobalans, &c. Riverius saith, a Girl four years Old, having a Marasmodies was cured in a Months space, by a thin Diet, wherein she took nothing but Broths all the day long, and at night some Barley Cream: but she was purged twice a Week with the infusion of ℥ij. of Sena, in a Decoction of Succory and Bugloss, made with Aniseeds; in which the Decoction being hot, the Sena was put for a whole Night without any other heat. § 4. Now while these things are in use, viz. the Alteratives in § 2. or the Purging in the former Paragraph, you must be careful to strengthen the Viscera with convenient Remedies. For weakness of the stomach, Wormwood Wine exceeds most things; so also Emulsions in which Salt of Wormwood is dissolved: for the weakness of the Liver, Spleen and Bowels, you may use this, R^x Conserves of

flowers of Borrage, Bugloss, Violets, Comslips, and Rosemary, A. ʒj. Conserve of Roses, Water-Lily-flowers, and of Wood Sorrel, A. ʒss. Pearls and Coral prepared, A. ʒij. powder of Harts-horn ʒj. Electuarius ad Tabidos, Mithridate, Confectio Alkermes, A. ʒvj. mix, and with Syrup of Pomgranates make an Electuary. If the flesh extreamly consumes, you must often give nourishing Clysters, made of Broth of a Chicken, or Sheeps-head, or Milk sweetned with Sugar of Roses, to all of which you may add yolks of Eggs: half a pint is enough for a Man, for if the quantity be too great, the Guts will be compressed, whereby the expulsive faculty will be forced to drive them out. § 5. For Topicks to cool and moisten withal, these following are chief. A Bath of fresh warm water is said to be principal, for it powerfully cools and moistens, and relaxeth the the External parts, that they may the more readily receive nourishment; but it will be better if it be made more humecting by boyling emollient and moistning Herbs therein, as Mallows, Althæa, Herb Mercury, Succory, Porrlane, Lettice, Violet leaves, &c. after Bathing, let the sick be dried with hot cloths, then gently anointed with Oyls of Sweet-Almonds, of Violets, or Roses, and after a little time of rest, eat some Broth or other food. A Bath of Simple Cows-milk is mightily commended (and not without cause) more especially if Aniseeds and Figs be boyled therein, and then mixed with Oyl

Olive. Zacutus Lusitanus, Lib. 3. Obs. 35. saith, a young Woman was cured with a Bath of water and Oyl, whom a simple Bath of Water and Goats-milk could not help. If the sick refuses a Bath, you may apply to the Heart and Liver Epithema Cardiacum, or Epithema Epaticum; as, also to the region of the Liver, you may apply Ceratum Santalinum. § 6. Hitherto of the first intention of cure: the second, which is the restoration of the radical humidity, and fleshy substance decayed or consumed follows, which consists chiefly in Diet; wherein we shall consider first the manner of living; secondly the Food; thirdly the Drink of the Patient. § 7. First as to the manner of living; let the Air be temperate either by Nature or by Art, let the motions of the Mind be free, cheerful and moderate, especially shunning those things from which the Marasmodies arose, as anger, sadness, fear, &c. motion and exercise of Body is not good, but rest must be enjoyed, especially if the Disease was raised from too great stirring: However before meat, if strength will bear it, some light Exercise may be beneficial; or instead thereof gentle Frictions presently after sleep, beginning at the inferiour parts of the Body, and rubbing only till a light redness appears, for longer rubbing would dry the Body: Coition with Women kind must be avoided as Death it self, because it strangely consumes the substance of the Body: sleep and watching ought to be in a mean, all excess there-

in is hurtful; however there is less danger in too much sleeping, because by it the Body is moistned which in this Disease is much to be desired; whereas too much Watching drys the Body and wasts the Spirits. The accustomed Emptyrings, and especially those that are natural and proper to each kind, if they are too slow, are to be promoted, especially if they weaken not the sick: if there is a Costiveness, you must provoke Stools with a Suppository, or a Clyster of Chicken Broth with Mallow, Althæa, or violet leaves boyled in it, adding Cassia, Honey of Roses, Butter, yolks of Eggs.

§ 3. Secondly, as to Diet. The Food ought to be cooling and humecting, and of speedy Nourishment: For as Diet in all Chronick Diseases can do much, so in this Disease it does more than all Medicines: Here are good, Chicken Broth, Broths of Hens, Capons, Patriges, Pheasants, Pigeons, Kid, Veal, Mutton, Lamb, young Hares, Conneys, and such like: So also the flesh of the same Creatures not too much Boyled or Roasted: Broth made of Barley husked, with Lettice, Pufflane, Sorrel, Endive, Succory, Borrage, Bugloss, Panadoes, Barley Cream, strong Water-gruel, Rice-Milk with a little Sugar in, and Almonds ground or beaten: or rather the greater cold Seeds: boyled Meats are more fit for the sick than roasted, because they more moisten, yet the inward part of roast Meat is good, and the sick may eat both for

change, and their Stomach sakes; which may be made grateful with juyces of Citrons, Lemons, Oranges, Verjuyce, &c. without Salt. To these add the *flesh* of Snails, Crabs, Tortoises, and of Frogs, which may be used in the beginning of the Disease, while the digestive faculty is strong; but when the Disease is confirmed, such clammy Food is not to be given because hard to digest. Hence it appears that Jellys made of Knuckles and Feet of Oxen, Calves, Hogs, or Sheep, and such like glutinous substances, are only of use at first: but if the Disease has gotten power, and the sick is become very weak, you ought to give the almost *Blood red Gravey and Juyces of the best Meat* and the most fleshy, as of Buttocks of Beef, Leggs of Mutton, Lamb or Veal, which may either drop out by slashing them, or otherwise be prest out: Or if you make Broth, you ought to cut them in peices, and cast away all the Fat, as also the Nervous and Musculous parts, which rather create Obstructions, than nourish: and then boyl the peices of flesh (in an Earthen Pot or Pipkin close covered) in a sufficient quantity of Barley Broth, so long till all the goodness is boyled out of the flesh. *Land Tortoises* are here mightily praised, being either boyled in Water till they are dissolved; then casting away the shels, the flesh is separated from the Bores, and boyled again with Borrage, Bugloss, Barley husked, Bramble leaves, Cichory, Purslane, Plan-

Plantane, Sorrel, &c. the sick drinking the Broth, and eating the flesh for twenty or thirty days together : Or the Tortoises are boyled in Barley Water ; and then their flesh is taken, and made into little Loaves with blanched Sweet Almonds, Pine Kernels the cold Seeds and Sugar, which are gently Baked in an Oven and given to the sick at Dinner and Supper. *R* Tortois flesh boyled in Barley water ℥iv. blanched sweet Almonds ℥vi. Pine Kernels ℥iij. the four greater cold seeds, A. ℥j. Aniseeds or rather Fennel-seeds dried in an Oven ℥jss. Cinnamon ℥ij. Sugar dissolved in Rose-water, the quantity of all the rest, mix, and make thereof little Loaves and Bake them : the like you may do with flesh of Chickens, Capons, Partridge, Veal, Lamb, and other flesh. *Fish out of Stoney and Gravelly places* may be eaten, and such whose flesh is tender and friable : *Among Fruits*, Apples, Pears, Plums, chiefly Pear-plums, Damask Prunes, Green Cucumers (which are most admirable things, and may be plentifully eaten, Pompions, Melons, Prunellas, Currans, Raisins of the Sun, Wall-nuts, Hassle-nuts, Sweet Almonds, Pine-nuts, Chestnuts, Pistachioes, &c. *of Roots* the Carrot, Turnep, Parsnep, Potatroe, Onions extreamly boyled : *Juyce* of baked Turneps is esteemed an admirable thing ; so Syrup of the same, as also Syrup of the Clarified juyce of Coleworts. A Restorative Broth : *R* Capons flesh with Veal and young Weather Mutton, or Lamb, freed

from all manner of skin, fat, nerves, muscles, &c. and cut into bits, which put into a Stone vessel well glased, in which about the middle, let there be a grate of Wood, or some other thing, on which the pieces may be so laid, that they fall not at the bottom ; then cover the Vessel or Pipkin with its cover, which lute well ; then let it boyl in B.M. five or six hours : so will you have in the bottom a pure Restorative Liquor of great force : of which four Spoonfuls may be given at a time either alone or in Broth, four, five, or six times a day. § 2 *Tordy*, as to Drink. Some Physicians order Barley water, alone or sweetned with White Sugar, or Syrup of Pomgranates : Others Water in which Crusts of Bread have been boyled. sweetned with Sugar Candy : But *Riverius* saith, That if the Patients Stomach be very weak, Wine well allayed with Water may be allowed, for that it helps the Concoction and distribution of the Nourishment. What we approve of is spring Water, in which so much Salt of Tartar is dissolved as to make it only Sweet, and than made farther pleasant with White Sugar Candy ; ℥j of it to a quart of Water. Or that drink in Sect. III. § 4. which we have often used with good success. *But above all things Milk is the principal and chief* : it being endued with all the Properties which can be desired in this Disease : for it cools, moistens, and nourishes much, and is easily distributed into all parts of the Body. Those with whom simple Milk does not agree

gree may take it with White Sugar Candy, or sweetned with Sugar of Roses : Or they may mix it with Water in equal parts, and so take it, or then sweeten it as aforesaid. Or thus : *R* Milk, Water (in which so much Salt of Tartar is dissolved, as only to make it sweet) *A*. *℞*iv. White Sugar Candy, or which is better Sugar of Roses *℥*iii. iv or v. mix and dissolve, of which let the sick drink liberally; but if they drink Milk for nourishment, they ought to drink it alone, or sweetned only with Sugar of Roses or white Sugar Candy, & by degrees to drink it, till they drink it Immeasurably, as to drink 12 or fourteen quarts a day : so taken for three months together, it does wonders. If the Disease proceeded from a putrid Fever : Milk ought not to be given, or if it be, it ought to be mixed with equal parts of Water, as aforesaid, and then sweetned with Sugar of Roses. See more in the Cure of a Consumption in *cap. 30. sect. 7. § 5.* as also in the Cure of a Phthisis, or Consumption of the Lungs, *cap. 30. sect. 21. § 10.* where you may receive abundant satisfaction. *§ 10. A Marasmodos following Inflammations, Apostems, Ulcers, and Fistula's cannot be cured, if besides all the foregoing Medicines, such others be not used which potently cleanse, and consolidate : Among which Balsam of Sulphur Anisated, or made with other Aromatick Oyls, is not the least effectual ; as also all Medicines made with Antimony that are more fixt, which neither promote Vomiting nor Purging :*

And also of common things all the Vulnerary Diets and Decoctions, appropriated to the Cure of Wounds, Ulcers, and Fistula's, are here of approved use. See *cap. 25. sect. 34. § 1. 2. 3. 4. 5. 6. 7. cap. 26. sect. 18. § 3.* as also Our Pharmac. lib. 4. cap. 14. sect. 5. 8. 11. 30. And Our Doron. lib. 2. cap. 14. sect. . If the Disease follows an Ulcer of the Lungs, it is to be cured by *cap. 30. sect. 21. aforesaid. § 11.* Lastly, If there comes upon this Disease a Læosneß, which is commonly Mortal, unless speedily stoppt, you must give a Decoction of parched Barley for ordinary Drink. Syrup of Quinces, Pouder and Tincture of dried Roses, Chalybear Milk, Rice-Milk, &c. if these things do not, you must give Laudanum à gr. j. ad iij or iv dissolved in Sack; as also exhibit a Clyster of Milk with which *℥*ij. iij. or iv. of Liqueur Vita Anodynus is mixt, which is to be repeated three or four times as occasion requires : Or exhibit Levigated Pouder of Emeralds ad x or xvi grains : if these things prevail not, the Disease is past hope ; but this you are to Note, That you be cautious of giving Opiates at the Mouth, least you provoke an Incurable Diaphoresis or Sweating, which infallibly and speedily brings the sick to his Grave.

XV. Marasmos, An Heftick with a Consumption of the solid parts compleated.

§ 1. Although there is no absolute cure for this Disease, yet a palliative cure may be instituted, by which the sick (while they live) may

may have some ease and comfort, and their days as some think) for a little time be drawn out. § 2. Now whereas in the former, heat and dryness did prevail; in this (the Disease having attained its state or height) cold and dryness has the sole predominancy, from whence the Indications of the Palliative Cure are to be drawn, which are two fold; the first is to heat and moisten the parts; The second to comfort the Heart, and revive the drooping Spirits. § 3. The first is done by taking often the emollient and restorative Diets and Broths mentioned in the former section at § 8. with which you may mix things of a warming and heating Nature, as Quintessence or Powers of Rosemary, Oranges, Limons, Nutmegs, Mace, Cinnamon; Moreover let all their Sawces be made with hot Spices; and let them drink liberally Milk sweetned with Sugar of Roses, and made as strong as the sick can well bear it, with the Blood red Tincture of Black Pepper in S.V. which single thing has almost done Miracles: you may often give the restorative Broth in the said former Section at § 8. mixt with Quintessence of Cinnamon ℥ij or iij at a time; or you may mix with the said Broth a little choise Canary. § 4. The second Intention which aims at comforting the Heart, and reviving the Spirits, is performed by these two following Medicines: ℞ Spirit of Angelica the greater Composition ℥iij. Spirit of Saffron ℥j. Oyl of Cinnamon ℥ij. mix and give half a spoonful three, four or six

times a day in choise Canary. ℞ Electuarium ad Tabidos, Conjectio Alkermes of Our prescription, Mithridate, A. ℥ij. Oyl of Cinnamon, salt of Vipers, A. ℥j. Musk, Ambergrise, A. ℥ss. mix and make an Electuary. Dose ʒss. Morning, Noon, and Night, drinking a draught of Milk or Broth after it.

XVI. *Isæna*, Morbilli, Sudamina, Rubiolar, The Measles.

§ 1. The Cure of these we have already declared in cap. 22. sect. 10. § 3. 4. 5. and in cap. 24. sect. 9. § 1. 3. 4. 5. nor does the Cure much differ from that of the Small Pox, spoken of in the very next Section. § 2. However to drive them out, you may give this: ℞ Waters of Carduus, Angelica, A. ℥ij. Scordium water compound ℥vi. Bezoar Mineral à gr. iv ad x. mix for a Dose. § 3. Against fainting and defection of the Spirit, or to abate the violent heat of the Feaver, you may exhibit this: ℞ Waters of Carduus, Dragons, Treacle-water, A. ℥ij. Aquafrigida Saxonica ℥jss. Pearls prepared ℥ij. Pulvis ex chelis Cancrorum ℥j. Sugar Candy ℥jss. Alexandrian Julep; or Julep of Roses ℥iv. mix for a Cordial, to preserve from fainting: Dose two spoonfuls now and then.

XVII. *Exanthemata*, Exanthemata, Ecthymata, Variolar, The small Pox.

§ 1. Although we have handled the Cure of this Disease in cap. 32. sect. 5. foregoing, very largely and compleatly; yet these things following seem necessary to be added: viz. That because it is a Feaver, arising

fining from an Acid Salt abounding, which by some violent agitation, stirs up an Original latent matter, and inflames it; you are not only to depress the Acid Salt but also to endeavour the expulsion of the matter inflamed, and now set upon a fermentation, from a fermentation of Blood.

§ 2. *The Medicaments suppressing the Acid Salt, must be an Alcalious Salt, of what kind is salt of Tartar, Salt of Wormwood, Centory, Scordium, &c. Pearls and Corals prepared, &c.* Tincture of Salt of Tartar and Tincture of Antimony extracted only with rectified S.V. being the Tincture of Basil.

§ 3. *The Medicaments expulsive of the enkindled and fermenting matter, are all sorts of Alcalious Sudorificks, and such as have Alcalies mixt with them: such are S. V. rectified; Tartarised S.V. Bezoar Mineral, and Opiates prepared with Salts of Tartar, Wormwood and Centory; which are of wonderful use, if given by a wise and prudent hand; for they not only provoke Sweat freely and largely, and so expel the Fæculencies and Morbifick matter to the skin, but also preserve from Gripings, and the danger of a Looseness, which in this Disease is for the most part of so ill consequence, as to cost the Patient their Lives.*

§ 4. *That for Drink you may safely give the sick fair water, in which so much salt of Tartar is dissolved as to make it tast sweet like Milk: This slays the Acid Salt, abates the heat of the Fever, and very much quenches thirst: if you please you may Aromatise it with*

Quintessences or Powers of the Cloves, Mace, Nutmegs, or Cinnamon, by which means it will become the more Cordial: The Salt of Tarrar takes away the crudity of the Water, clears it of its filth, as if it was distilled; and makes it safe: so that if the sick should be extream thirsty, they may liberally drink thereof, the want of Liquor to quench Thirst being oftentimes in this Disease the Death of many a Patient.

XVIII. Πορφυρεα, Febris Purpurea, Petechialis, Peticularis, Punctularis, Lenticularis, The spotted Fever.

§ 1. *It is cured by Sweating with powerful Sudorificks, by which the malignity may be expelled; for which purpose Bezoar stone is good, Emulsions of Navew and Citron seeds, with Carduus water and Syrup of Citrons: the Bones, Blood, Horns, and Skin of the Rhinoceros; Saffron, Roots of Scorzonera in Essence, Pouder, Tincture or Spirit, Tinctura Diaphoretica Paracelsi, Elixir Vitæ Quercetani majus & minus, &c.* § 2. *You must after sweating give Alteratives, which have a specifick vertue against malignity, and the Fever: as Pouder or Tinctures of Scorzonera, Purple grass, Contra yerva, or Virginia Snake-root, in juices of Citrons or Pomgranates: Oyls and Spirits of Salt, Sulphur, and Vitriol may be given in proper Vehicles, because they potently resist malignity and putrefaction, and so destroy the very Essence of the Disease.* § 3. *Then you must corroborate and strengthen the*

faculties, with Emulsions of Corals and Pearls, *Confectio Alkermes*, *Sal Serpentum Bezoarticum*; *Sal Aureum Mylij*, *sal Bezoarticum Vitriolatum*, *Nectar Vitrioli Mynsichti*, *Liquor Vitriolatus Mynsichti*, *Tartareus Mynsichti*, *Magisterium Salis* (which is the coagulated Spirit of Salt of Mynsicht.) *Magisterium Vitrioli*, &c. which you may give in Emulsion of Sweet Almonds, or in *Electuarium ad Tabidos*. § 4. During the whole time of the Disease, apply proper Topicks to the Pulses, as *Mithridate* and *Venice Treacle*: to the Heart fit Epithems, as *Epithema Cardiacum* mixed with *Quercetans Elixir Vita*; or *Electuarium de Ovo*. § 5. If there be evil Symptoms as coldness of the extremities, Head-achs, Ravings, Convulsions, &c. You ought to apply Vescicatories to the external parts, Cupping-Glasses, &c. If there be a Looseness, it is dangerous, yet ought not to be stoppt immediately; when you see it fit, do it with the levigated Powder of Emeralds given *ad gr. x. xii* or *xvi*. it transcends all other things, and does the work, when no Abstersives, Astringents, Opiates or Antidotes will do. § 6. If there be a Raving, or Frenzy, or too great Watchings, or restlessness, give *Laudanum gr. ij*. dissolved in Treacle water $\mathfrak{z}\text{ij}$. Sorrel water $\mathfrak{z}\text{ij}$. § 7. Lastly, when the Disease seems to be overcome, (which is seldom before the fourteenth day, you ought to purge away the reliques of the morbidick matter with gentle Catharticks; And if the Disease seems to go away

by Urine, to give proper and cooling Diureticks.

XIX. *Morbus Hungaricus*, *Febris Militaris*; *The Hungarian Disease*, *Camp Fever*, or *Calenture*.

§ 1. Many Physicians make the *Camp Fever* and *Calenture* to be two Diseases, which we account to be but one; the chief difference being, that on Land it is called the *Camp sickness* or *Fever*: but at Sea the *Calenture*: 'Tis true that there are two several species of it: the one continual and without fits; the other with fits, hot and cold, to both of which we shall speak in order, and first of the *Calenture* continual and without fits.

§ 2. The person being seized with this Disease, is forthwith to be put to Bed, and then immediately *Cordial Sudorificks* are to be frequently given, as *Bezoar Minerale*, *Antimony Diaphoretick*, *Mithridate*, *Venice Treacle*, *Diascordium Elect.* *de Ovo*, any of which you may exhibit in *Tinctura Diaphoretica Paracelsi*, to every Dose of which you may add \mathfrak{a} gut. viij *ad xij*. of spirit of *Sal Armoniack*.

§ 3. This done, if you find a saltness upon the Stomach, or an Inclination to Vomit, you may exhibit *sal Vitrioli*: Or *sal Tartari Emeticum Mynsichti*: or Powders or Decoction of *Asarum* roots. Or this, *R Infusion of the Powder of the Glass of Antimony ℥vj*. *Carduus water ℥ij*. *Oxymel Scylliticum ℥j*. mix them. § 4. But if there be no such fullness of the Stomach, you ought again and several times to give the *Sudorifick Potion* as before, and then to look after the sick very carefully, not using either

ther Vomit or Purge, till the declination of the Disease. § 5. The Sweat being over you are to give Antifebriciticks, which gently cool, and may also resist the malignity and contagion; such are *Magisterium salis & Vitrioli*, *Mynsichti*; *Liquor seu Nectar Vitrioli*, *Liquor Vitriolatus & Tartareus Mynsichti*, sweet Spirit of Salt, Oyls of Sulphur and Vitriol, all which may be exhibited in proper Vehicles. To these you may add the Tinctures of Saffron, Cochinele, *Contra-yerva*, *Radix Serpentaria*, *Scordium*, *Scorzonera*, and other Antifebriciticks, which very much comfort the Heart and cheer the Spirits. *Mindererus* commends Powder of Zedoary given ad ʒj in Vinegar of Rue: Or the *Pulvis Hessij* (which see in Our *Doron lib. 2. cap. 21. sect. .*) which may be given ad ʒij. but instead of Ginger in that Composition, I should rather advise to *Carlina*: this Powder you may exhibit in *Emulsio Antifebricitica*: you may also now and then give the Anisated Balsam of Sulphur, (made also with Camphir:) it is none of the meanest remedies; you may give à gut. vi. ad xij. or more in a little Venice Treacle, or Carduus or Scabious Water, or rather in the *Acerum Regni Polonie*. § 6. If the sick has a strong thirst, you may give Water made indifferent Tart with Oyl of Sulphur of which the sick may drink freely; it is essentially good against the Disease; cools the whole Mass of Blood, being insinuated there into by the Veins, and powerfully quenches thirst: Or, Take

fair Water ℥ij. Syrup of Limons ʒij. Oyl of Sulphur gut. viij. mix for a common drink. § 7. If the sick is restless, you may give Syrup of Meconium, or of Wild Poppies, *Diacodium*, *Laudanum*, or some such like in a fit Dose, and a proper Antifebricitick Vehicle. Or this, R Poppy Water and of Wood Sorrel, A ʒjss Syrup of Corn Poppies, *Diacodium*, A ʒvj. *Diascordium* ʒj. mix for a sleeping Potion. § 8. For the violent pain of the Head you must apply Topicks, as in many other places we have advised, also Vescicatories to the Wrists and other parts, which are very effectual if timely applyed: R *Cantharides* ʒss. Turpentine ʒij. *Olibanum*, Myrrh, *Mastic*, *Camphir*, A ʒss. Oyl of Roses q.s. mix for an Emplaster: Or you may use the common Epispastick in our *Pharmacopæia*: *Mindererus* found great benefit by applying to the Wrists Rue beaten with Vinegar: and anointing the Back-bone with *Unguentum Rosatum*, unless spots appeared which caused him to forbear the Unction: To the Heart he advises to apply *Epithemata* of Rose-water and Elder-Vinegar with Camphir, except spots as aforesaid appear, for then you are to anoint the Heart with Oyl of Scorpions: if the Body be bound let it be opened with a proper Clyster. § 9. For the Diet of the sick, it ought to be the same which we prescribe in all malignant Feavers: You may refresh them with good Barley Broth, and a little Vinegar or Oyl of Sulphur may be put to it, to make it grateful to his Stomach: He may also eat

eat fresh Butter in a Morning ; or take it down in watn Barley Broth or Batley Cream. His drink may be Water in which Bread has been soaked, which you may make pleasant with Sugar and Oyls of Sulphur, Vitriol, or Vinegar: if you have no Sugar, you may use Water and Vinegar alone, which is a good Drink in these Feavers, and was drunk of old among the Roman Soldiers under the name of *Posca*. Those which drink Wine are sure to dye for it. But if there is any Disease of the Lungs adjoynd, you must not make too much use of acid things, but be content with *Prisan*, or decoction of Barley and Liquorice. § 10. If at the going off of this Disease, a hot defluxion should fall into the Eyes, take Camphir and infuse it in Water, and often moisten the Eyes therewith ; and if the Weather be cold and windy, you will do well to keep your self out of the open Air. § 11. The Disease being now in apparent declination, if you find the stomach of the sick to be foul, you may give once, twice or thrice (as you see occasion) the Emetick at § 3. aforegoing ; otherwise you may once give the said Emetick ; and then purge with Catharticks, among which *Agarick* is chiefly commended. Or this of *Horstius*, *R̄ Mechoacan* ʒj. *Cremor Tartari* ʒss. make a Pouder, which give with Pease Broth. Or, *R̄ Benediſta Laxativa* ʒj. *Mercurius dulcis* ʒj. *Resin of Fallap* gr. iv. v. or vj. mix for a Dose, which is an approved thing. § 12. If the Calenture is with fits cold and hot,

intermissive ; you ought to cure it in all respects as an Intermittent Feaver, to which it is most like, but with this Caution, that you mix with all your Medicaments Antidotes against malignity and contagion. First, if the Stomach be foul give a Vomit, two or three times : Then exhibit a proper Clyster or Suppository : afterwards give one of the Catharticks in the former Paragraph. Or this, *R̄ Electuarium Lenitivum* ʒj. *Cremor Tartari* ʒij. *Alercurius dulcis* gr. xiv. *Confectio Alkermes* ʒj. mix and make a Bole. The Body being purged Sweat with some of the former things, or with *Aurum Vita*. Or with this, *R̄ Syrup of red Poppies*, *Diacodium*, *A. ʒvj.* Poppy and Angelica water, *A. ʒjss.* Treacle water ʒijj. *Diascordium* ʒij. mix for a Julep. For Ordinary drink, *R̄ Water* ʒvj. *Harts-horn* calcined to whiteness ʒj. boyl to a Consumption of a third, strain, and add white sugar candy in fine Pouder, *Syrup of Limons*, *A. ʒij.* Oyl of Sulphur gut. xxiv. mix them, it is an excellent drink in all these kinds of Diseases.

XX. *Sudor Anglicus*, The sweating sickness or English Plague.

§ 1. The Cure of this Disease has but one Intention, which is a continual Sweating for the space of twenty four hours, as nature herself has indicated to us : for those who would not Sweat, nor use Cordials, but bore the heat impatiently, and took cold, all dyed within twenty four hours space ; but when the reason of the Disease became known, and people were willing to Sweat, and

and to fortify themselves with Antidotes, fewer dyed. § 2. *Polidore Virgil describes the Cure*: After many Experiments and Observations taken from things helpful and hurtful to the sick, by use they found out the best remedy, which was, when any one was taken with this *Plague*, he went (if in the day time) presently to Bed, with his Cloths on; if in the night, and in Bed, he kept himself there, rested quietly, nor stirred nor moved himself from the place, till twenty four hours were past; in the mean season he was so covered with Cloths, that the Sweat might not be provoked; but that it might come forth orderly of its own accord: He took no meat if he was able to fast so long; nor any more drink (and it warm) than might be just enough to quench thirst: *in this Cure the chief thing was, to beware of taking cold, and that the sick did not so much as put forth his Hand or Foot out of the Bed, for so much doing made the Disease Mortal.* § 3. *Now Nature by its extreame struggling, sending forth these copious sweats (as the most ample way of Excretion) endeavours thereby to discharge her self of the whole Poyson, freeing the Blood therefrom and sending it forth to the habit of the Body: which is for a while, universal through the whole, continual, and equal: by the means of which Ephidrosis, health comes suddenly and as it were upon Wings: but if by means of this fermentation, and endeavour of secretion, into which the Blood*

is stirred up, for the sake of expelling the malignant *Miasma*, all the Venomous particles are not suddenly cast forth; the mass of Blood, both, in a manner deprived of its Serum, and undone in its *Crasis*, not being able any longer to continue its Vital flame, lets it vanish and goe out. § 4. *And as this Nervous liquor is truly become thus very malignant and pestilent, that at the first touch, it empoisons the Blood, and fuses it into serosities (being sent from the Fibres and Nervous parts, into the bloody mass;) so for the same cause, it is presently at its first approach suddenly cast forth by a copious Ephidrosis, and not suffered to stay at all, that it might not be intimately mixed with the Blood: for otherwise, if through taking cold it is stayed in the Bloody mass but for few hours, (whereby it may circulate and be thoroughly mixed with it) it certainly mortifies it; and from hence it was that the sick stayed not the putting off of their Cloths, but went presently to Bed with their Cloths on, were put to Sweat, and Sweat twenty four hours equally through their whole Body, and were not suffered in the mean time to stir either hand or foot, nor to take food, nor to sleep, least thereby the total exclusion of the malignancy should be hindered.* § 5. *In the days of Senertus several sudorificks were given, as Sorrel water, Scabious water, Terra sigillata, &c. (but there are better, and more powerfull Medicines, which you may choose at pleasure;) by the means of which*
the

the Sweating was the easier continued for that length of time, viz. for the space of a whole day and night: and although the sick was not permitted to sleep, or to be uncovered till the sweat was over, yet in the mean time they were refreshed with the Juyce of Citrons, Pomgranates, and such other like things.

XXI. *Aquæ, Pestis, The Plague.*

§ 1. *Intreating of this Disease, we shall consider the Cure, first preventive; secondly Invasive; thirdly, Symptomatical. The Signs, Causes and Judgments hereof, we have already delivered in short in Lib. 1. Cap. 56. Sect. 21. and Lib. 2. Cap. 43. Sect. 21. to which we shall here refer you.*

But the Plague, as it is a Disease whose essence is not easily comprehended; so its cause is for the most part, not only hid from the Eyes of most Mortals, but also superiour to all other natural things and causes; it being many times a punishment inflicted upon us by the immediate hand of the great God, for the manifold prevarications and offences of Mankind.

§ 2. Barber doth confidently affirm, that as a Pestilential Fever may be without the Plague, so the Plague may sometimes be without any Fever. Now although we are loth to enter the lists of Controversy with so Famous and Worthy a Man, yet we are not altogether willing to over-pass this thing in silence. The first part of this Proposition we shall not deny; the latter part thereof we contend against. However, he ought first to have given

a Definition of the Plague, that the Terms might have been unfolded, and then have proceeded to the Proposition it self. If the Plague is not a Fever, we desire to know what it is. We have described it to be an equal contest in the Heart, of a Volatile and Fixed Salt with an Acid; whence arises an Effervescency and Inflammation of the Blood, together with putrefaction, abominable stench, and a poysonous malignity; so that it comes to pass, that the Disease is not only exceeding acute, but also contagious; forasmuch as the Venomous Miasma, by the perpetual fermentation and effervescencies of the Blood, and Humors constantly breathing forth, both by the breath, and the innumerable pores of the skin, are sent out in such great and continual fluxes or streamings, that they strike upon, and endeavour to contaminate what ever they meet with; or lyes in their way. But the Famous Barber, confirms his Opinion, by his own experience, because that several of his Patients, who although they appeared otherwise in good health, not refusing their meat, nor disturbed in their sleep, have nevertheless had Buboes arising in their Groin, on their Neck; under their Arm-pits, or behind their Ears, which have apparently discovered a greater malignity than could be discerned in those Buboes, which in other persons have been attended by a violent Fever. But by the favour of this Excellent man, when did he ever find malignity seize upon any thing animated without a

Feaver? If we consider but the Biting of a *Viper* upon the tip of a Mans Finger, how soon the person bit falls into a great Feaver; it cannot be from the magnitude or danger of the Wound; for, as to the first, it is so small that it can scarcely be discerned; and as to the last, the part and place is so inconsiderable, that no such accident as a violent Feaver could arise there from; whence comes the Feaver then? Doubtless from the malignity and poyson of the *Viper*: and if so, as certain it is, does it not appear, that malignity and poyson how small soever, and in parts the most remote from the Heart, cannot seize and contaminate without exciting of a Feaver or feaverish disposition? And shall we then believe that such malignity and poyson or rather much greater by many degrees, shall assault the very Heart it self (the Fountain of Vitality) and the sick goe scot-free? But suppose no Feaver be discernable? must we then conclude that there is no Feaver; must the defects of Our Senses, or want of discerning in Our Intellect, destroy the Essence of that which is, and make that because we cannot see it, that there is no such thing? Let us go a little farther, and demand, for what reason was the *Bubo* thrust forth? And by what Virtue and power was it driven out? If you say, that Nature did it by her own power, for the security of the Vital parts, it must then be granted, that there must be a *Contest*, and if a *Contest*, a

preingaging and exciting of the Spirits and Powers of Nature to that *Attun*, which preingagement had not been had not the Vital powers been first assaulted by the malignity and poyson arising from the disagreement of those different Salts; and now what can this be called unless a Feaver? And therefore if the Symptoms of the *Plague* appear, without any eminent signs of a Feaver, it is not, that there is no Feaver, but that Nature is very strong and vigorous, and so by her own force, excludes that malignity to some other part, where it may be less dangerous, by reason of which (*viz.* from the so sudden exclusion) the Feaver already begun in the Heart, cannot so easily appear outwardly. § 3. And whereas Barbet also pleades his experience in this Case, I hope he will permit us in like manner to plead Ours: During that great sickness in London, Anno 1665, wherein there died above an hundred thousand, I was constantly in that City, (not being to the best of my remembrance one day out of it, from the very beginning of that great Plague to the end thereof: I visited many thousand sick of that Disease, and viewed with great Circumspection both the Living and the Dead, (there being now at the writing of this many alive, which can witness my care, diligence, and sedulity therein, whom through his Blessing, whose Mercies are over all his Works, I pluckt even out of the very Jaws of Death.) But yet amongst all those many hundred with which

which I was concerned, I met with none which the true Plague had seized, but there was some appearance of a Feaver either great or small: yea even in those persons whom that cruel and merciless Pestilence handled with the greatest Curtesy and Generosity: for there was either an over frequent preternatural Pulse, (by which some Authors define a Feaver: Or some inordinate Thirst: Or else a gentle preternatural heat over the Body: Or else a high colour or redness of the Face, with small Erratick or wandering pains of the Head, which I observed in several which had Buboës come out upon them, without any other Symptom of the Pestilence or other illness. The least of these in my Apprehension indicated a Feaver, and with less Symptoms than these, I saw none which were truly seized with the Plague. But enough of this in Opposition to the most excellent Barbes. When Our History of Cures shall come abroad, we shall relate many notable and eminent Observations and Experiments in the Cure of this Disease, which we made in the time of that great sickness, when almost all the Coll-giates and great Physicians of the Town, fled and ran away.

I. Of the Prevention, or Preservation from the Plague.

§ 4. Here we shall not follow Authors so much as Our own Experience: and that we may do this Methodically, we shall shew, first,

what ought to be avoided: Secondly, what Antidotes are to be taken: thirdly, what Topicks are to be applied; fourthly, what Xenechtrons or Amulets are to be worn about the Body. § 5. As to the first, what things are to be avoided: and they are all such things as infer the Pestilence. You ought not to weaken the Body by Blood-letting: frequent Coition is to be eschewed, because it debilitates the powers and strength of the Body, dissipates the Spirits, and causes an attraction of other matter in the Place: you are also to shun a Sedentary Life, and excess in Diet, for from thence proceeds manifold Obstructions, a corruption of the juices, and a preparation of the Body to Putrefaction, and reception of the Pestilence: If any are troubled with Fistula's or old Ulcers, they are not to be healed up, in the time of a Plague; and you ought rather if there be none, to make an Issue, to give the humors scope, in a convenient and declining place: that by these Channels or sinks of humours, the Body may be emptied of its filth, and uncleanness. You ought also to beware that you touch or handle not any of those things, wherein the Seeds of the Pestilence may lye hid, as Quilts and Coverings, wherein such as have had the Plague have lain, as also all Leather things, Cloths, and Hanging. You ought also to dwell far from, and avoid Burying places, shambles of Flesh, and Fish, Tan-houses, Diers, Tallow-Chandlers, Farriers, Skinners, and places where the Plague

is outrageous : as also Dunghills, Privies, stinking muddy Waters, close & putrefied Airs, evil smells, &c. You ought also to avoid the Company of Nurses, Grave-makers, Searchers, and Bearers, who altho they have not the Plague, yet may carry the infectious Seed thereof in their Garments. You ought also to abstain from all Passions of the Mind, especially Anger: also to avoid Hunger, Thirst, Jourayings in the Sun, or any violent act or motion, which may over heat, inflame, or cause a Fever, by which means the Pores being opened, the habit of the Body is made apt to receive the Pestilential Seminaries. Lastly, *as the greatest and chiefest thing : that every Man and Woman turn from their evil ways ; from all their Vices, Wickednesses and Abominations, and dayly manifold Offences whether publick or hidden, by which God Almighty is provoked to Wrath, and to manifest his Sore Displeasure, in the destruction of Mortals, yet retributing upon their Heads, but a small portion of their Crimes and Impieties : for as much as without such a speedy return and amendment, no trust or security, can be put in any caution, preservative, or Antidote, what or how prudently soever composed.* § 6. Secondly, *what Antidotes are to be taken. Altho the common advice, to go away quickly, to fly far off, and to be long in returning, may be lawful enough to such whose condition of Living enforces not the contrary, yet they are to consider, that the Pestilence is the Rod of God, and that Man cannot fly from the presence of the Almigh-*

ty, or beyond the reach of his Power; and therefore, that they ought always to take along with them, the fear of the Lord, which is to depart from Evil, an humble Heart, a contrite Spirit, and strong Resolutions to depart from their Sins and Iniquities : that in the simplicity of Soul, seeking after God early, they may find him, (who is indeed not far from every one of us,) before whom, prostrating themselves, they may make their Addresses with earnest Prayers, and fervent Supplications, not doubting, but that if they ask in Faith, they shall absolutely receive their requests from the Hand of God. But as for Physicians, their running away is not only Scandalous, but (without just reasons) unlawful : for as much as the looking after the Sick is their Duty, and that they are called thereto not by men, but by God himself, upon whom they ought to wait, in all their Counsels and Actions : and by whom they ought to be guided and directed in all their intentions and undertakings : knowing, that while they attend upon this their Duty, they serve God in helping his wretched and miserable Creatures : being also confident that their Lot or Portion is in the Hand of the Lord, and that they shall receive from him (their Master) an Ample reward, whether it be in Life or Death. Now, in this their Attention, they ought to take fitting Preservatives or Antidotes, and to Visit the sick withal imaginable care and caution ; as, to turn their Faces as much as may be from the Breath of the Sick :

to avoid the steems of the Bed : to eschew the Vapours arising from any Bubo, Carbuncle, or Plague sore : to view them with what speed may be : to wash their Hands after touching the sick : and to make but a short stay in the house visited. The Method of taking Preservatives and Antidotes is this; Weak Bodies ought to be strenghtned with a Restorative Diet, and Alexipharmick Medicines : a clear Fire ought to be kindled in all Lodging Chambers and Rooms of the House, which you are also to perfume with burning Juniper-wood, Juniper-berries, Gums, Rosin, Pitch, Tar, Fir-wood, Gun-Powder, and such like : This done, rising in a Morning, you may eat two or three Cloves of Garlick (if you can away with it) there is no more certain Preservative, and Ahtidore against Pestilential Venom than it, especially if you drink after it a good draught of Generous and clear Canary : for thereby it is presently, abundantly diffused over all the Body, fills up the passages and Pores thereof, and strenghtens it in a Moment. Those that cannot take Garlick may take the Cordiale Antidote of Roger Dixon, a London Chyrurgian (who lived in the time of the last great Plague) thus made. R^e Rue, Sage, A. M j. roots of Masterwort, Butter-bur, of Angelica, Zedoary, A. ʒss. Virginia Snake-root ʒij. Contra-yerva ʒj. Saffron ʒj. infuse all in Canary lbij. in a Pipkin close covered, over a Fire not great enough to make it boyl, for the space of two hours or more :

then strain it out, and dissolve therein Mithridate, Venice Treacle, A ʒss. Take of this, first every morning, and last every night, three or four spoonfuls for preservation; (but if taken sick, you may give ʒiiij or more, putting them to bed, to sweat well upon it,) this Liquor powerfully fortifies the Vitals, and by sweat throws out the Malignity of the Distemper. You may also use, if you please, Roger Dixons Drink, which is a singular preservative, R^e leaves of Carduus and Scabious, Butter-bur roots, A. ʒiiij. Possee drink lbvj. make a Decoction by boyling : strain, and let it be taken as ordinary Drink. If you have not Posset-drink, you may use Spring-water, which in my Opinion is better : with this he told me he cured many hundreds infected, who by drinking largely of it, were often-times cured in twenty four hours, when nothing but Death has been expected, and by which he also stayed Pestilential Vomitings and Loosenesses. Pareus, lib. 22. cap. 7. commends Treacle Water to be given ad ʒij. in Sack, as an admirable preservative, he also saith that Confectio Alkermes is very effectual, both to preserve and to Cure. Venice Treacle is commended, so is Mithridate, Elettuarium de Ovo, Elixir Proprietatis, Bezoar Stone, Salt of Vine Branches, Salt of Yarrow, Extract of Juniper-berries, &c. every other night going to Bed, you may give P^ol. Ruffi ʒj. ʒss. or ʒij. that the stomach may be strenghtned, and the Body kept free and clean from all ill humors

mors; Or you may give this of Barbet: \mathcal{R} roots of Scorzonera \mathfrak{z} iiij. Sena \mathfrak{z} ij. Rhubarb \mathfrak{z} js. Cremor Tartar \mathfrak{z} j. Aniseeds \mathfrak{z} ls. Carduus water q; s. boyl, and to \mathfrak{z} iiij. of the strained liquor, add syrup of Succory with Rhubarb \mathfrak{z} vj. Confe&io Alkermes \mathfrak{z} ls. spirit of Salt gut x. mix for a Potion. The next morning take a small Portion of the Preservative you intend, which may be either some of the thing before named, or some of these following: \mathcal{R} choise Canary \mathfrak{z} iiij. Quintessence or Powers of Wormwood gut. xxx. or more: mix them, to be taken in the morning fasting, and last at night: Or, \mathcal{R} choise Canary \mathfrak{z} iiij. Powers of Nutmegs, Cloves, Angelica, Cinnamon, A. gut. x. mix; to be taken morning and night. Or, \mathcal{R} choise Canary \mathfrak{z} iiij. Powers of Juniper-berries 60 drops: mix to be taken as aforesaid. Green Walnuts preserved, are much commended: so also Orange, Citron and Limon Peels: Barbet commends this. \mathcal{R} Prophylactick water \mathfrak{z} vj. Julep of Roses \mathfrak{z} ij mix, and take thereof two or three spoonfuls every morning and night. The Prophylactick Conserve of Barbet, may also be given \mathfrak{z} ls. or more at a time in a morning, or as often as one goes to an Infected place, drinking after it a little glass of Canary. To these you may add, Theriaca Silmoniana major & minor, Theriaca Solomonis, Orvietanum magis compositum, Spiritus de cornu Cervi, Spiritus Diapente, Sp. Theriacalis Camphoratus, Aqua prophylactica Syloij. The powder of Elecampane roots, of Angelica, of Bur-

ter-bur and Zedoary, Infusion of Gentian in Wine, Wormwood Wine; poulder of Terra Sigillata ad \mathfrak{z} j. with a little Saffron, Tinctura Diaphoretica Paracelsi, Our Pestilential Drops (thus made, \mathcal{R} S. V. Tartarized \mathfrak{z} j. Gentian, Zedoary, A. \mathfrak{z} j. Bay-berries, Thebian Opium, A. \mathfrak{z} ls. Infuse the Species twenty days; then dissolve the Opium, Infuse twenty days more, decant, and keep it for use :) given ad gut. xvi. or xx. in Canary: Aqua Epidemica, Bezoartica Langij, Cordialis frigida Saxoniae, Imperialis, Mirabilis, Celestis, Regina Hungariae, Scordij Composita, Bezoartica Matthioli, de Tribus Paracelsi, Theriaca Camphorata febrifuga, Cordialis Calida Saxoniae, Aromatica; Balsamus Polychrestus Mynsichti, Balsamum Angelicæ Sennerti, Cordiale Sennerti, Citriorum Compositum, Elixir Alliatum, Pestilensiale Crollij, Camphoræ, Syncapticum Clossæi, Vita magis & minus Quercetani, Vitrioli Mynsichti, Elixir of Sulphur; Tinctures of Antimony and of Corals, Tinctura pestifera, Extractum Antipestilensiale Zwelferi, Bezoardium Quercetani, Pestilensiale Schroderi, Aureum Hadriani; Magisterium Vitrioli & salis Mynsichti Sal Bezoarticum Vitriolatum Sal Absynthij, Vinum contra Contagiosum Aerem, Acetum Theriacale Norimberg. Antipestilensiale, Regis Poloniae, ex Ruta Compositum, Bezoarticum Sale, Mythridaticum Mynsichti, Alexiacum, Prophylacticum Weikardi, Bezoarticum Francofurtense; Eleosaccarum Citri, Mynsichti; Pulvis & chelis cancerorum, Cardiacus Magistralis, Bezoardicus Magistralis, Species

Antipestilentialis Montagnanae, Pulvis ad Pestem nost. Confectio de Hyacintho Theriaca Londinensis Vulgar, and that of Our prescription (which may be given ad ℥j. in Sack for prevention; but ad ℥j. or more for Cure :) *Diacrocuma, Antidotus Matthioli, Eleazarium Camphoratum, Alexipharmicum, Antidotus pestilentialis specifica Salaë, given ad ℥ss. Trochisci Alexiterij, de Gallia Moschata, Hedychroi Galeni, Crocogramma Damocratis, Trochisci Prophylactici Bechrolis Rivij, &c.* Out of all which, you may chuse what you like best, or what best agrees with the Constitution, or indeed that which you can best come by : there are many more Antidotes, but it is not my business to insert them all: your own Reading with a little dilligence, may easily inform you, and give you the choise of the best and most powerful. § 7. Thirdly, what Topicks are to be applyed. After the taking of the preservative Antidote in the Morning: you are next to wash the whole Body with this: R. Rose-water, Vinegar of Roses, White Wine, A. ℥vi. roots of Elecampane, Angelica, Gentian, Bistort, Zedoary, Juniper and Ivy-berries, A. ℥iij. Rosmary, Rue, Sage, Wormwood, A. M. j. Citron peels, Mithridate, Venice Treacle, A. ℥j. bruise what are to be bruised, boyl with a gentle fire, and keep it for use: Or you may wash with the King of Polands Vinegar: Or with Vinegar in which Rue, Sage, Bay and Ivy-berries, have been boyled : for Vinegar is an Enemy to all Poysons in general of what kind soever, resisting and

hindring Putrefaction and Infection, being of very subtil parts : if you are unwilling to wash the whole Body, you may then only wash the Temples, Forehead, Face, Neck, Shoulders, Arm-holes, Wrists, Hands, Stomach, Groins, and Instruments of Generation. If you yet mislike this Bathing, anoint those parts with Lennertus his Chymical Balsam of Angelica : with Oyl of Nutmegs by expression, or other like things which have the Power to resist the putrefaction, malignity, and contagion of the Plague. The Nostrils you may Bath with Vinegar, and anoint with Oyl of Scorpions. Often smell to Pomanders made of Pitch, Tar, Rosin, Wax, Camphir, Cloves, Mace, Nutmegs, Cinnamon, Orrice, Sweet Marjoram, Mint, Storax, Benjamin, yellow Sanders, Corrianderseed, and such like, to which you may add, if you please, Musk and Ambergrise. § 8. The use of Xenechtons or Amulets. These are things to be worn about the Neck, and to hang against the Region of the Heart. Quick silver inclosed in a Nut-shell is commended : So also a dried Toad, sewed up in a peice of Silk, and hung at the Pit of the Heart. Arsenik pure, or not mixt with any other Body, least its Virtue should be abated, is profitably applyed to the same place, wrapt up in Silk : but it ought not to be heated, least it penetrate through the Pores into Body. But some advise to wear the Arsenical Magnet which see which see in Our Pharm. lib. 4. cap. 11. sect. 50. Others to make it up into a flat Cake with Benjamin,

jamin, or some other Gum : Others to wear a Roul of the Magnetical Emplaster of Hartman, described in Our Pharmacopœia lib. 5. cap. 6. sect. 82. where you may see it at large.

II. Of the Cure of the Plague.

§ 9. For as much as the Plague is a Disease not to be plaid withal but of extream danger, the Life of the sick being apparently at stake : we must first and immediately propose those Indications, which may secure us against the force of its malignity and Payson : this is done chiefly by the use of strong Sudorificks and powerful Cordial, which may both expel the pestilential Miasms through the Pores of the Skin, and strengthen or defend the Heart against the assaults of its Venom. § 10 Proper Sudorificks and Cordials against the Plague, are these following : *first*, Roots of Angelica, Avens, Aders-tongue, Birthwort, Burnet, Butter-bur, China, Costus, Contra-yerva, Carlina, Dictamnus, Elecampane, Gentian, Garlick, Galingal, Lovage, Masterwort, Orrice, Sarsaparilla, Scorzoneria, Virginian Snake root, Tormentil, Viper-grass, Zedoary. *Secondly*, of Barks, Cinnamon, Mace, Cassia Lignea, of Guajacum, of Limons, of Oranges, and of Sassafras. *Thirdly*, of Woods, Guajacum, Juniper, Rhodium, Sassafras, Yellow-Sanders, Xyl-aloes. *Fourthly*, leaves of Angelica, Avens, Agrimony, Burnet, Bawm. Betony, Carduus, Calamint, Costus, Cyperus Centory, Fluellin, Marjoram, Mint, Rose-

mary, Rue, Sage, Savory, Scordium, Swallow-wort, Sorel, Valerian, Lime. *Fifthly*, Flowers of Borrage, Bugloss, Cloves, Betony, Hypericon, Indian Spicknard, Jessamy, Marigolds, Roses, Rosmary, Saffron, Sage, Violets. *Sixthly*, Fruits, as Bay-berries, Barberries, Citrons, Cherries, Figs, Juniper-berries, Limons, Oranges, Pippins, Pomgranates, Walnuts, Raisins. *Seventhly*, seeds of Annise, Angelica, Citrons, Hypericon, Coriander, Carraways, Lovage, Limons, Oranges, Mustard, Rocker, Rue. *Eighthly*, Spices, as Cinnamon, Cloves, Mace, Nutmegs, Ginger, Pepper, Jamaica Pepper, Cardamums, Grains of Paradise. *Ninthly*, Gums, as Myrrh, Aloes, Storax, Benjamin, Opium, Labdanum. *Tenthly*, Perfumes, as Ambergrise, Civer, Camphir, Musk. *Eleventhly*, Animals or their parts, Vipers flesh, Mummy, Serpents, Unicorns horn, Bezoar stones, Cochenele, Hartshorn, Ivory, Quails, Thrushes, stone of an Indian Hog, Castoreum, Crabs-Claws, Crabs-Eyes, Toads. *Twelfthly*, Salts, of Scordium, Centory, Wormwood, Rue, Carduus, Self-heal, Tartar Vitriolate, Sal Bezoarticum Vitriolatum, Magisterium Vitrioli & salis Myrsichti. *Thirteenthly*, Precious Stones, and other Minerals, as Granar, Jacynth, Saphir, Sardine, Emerald, Ruby, Carbuncle, Pearls, Corals, fine Bole, Terra Lemnia, Terra sigillata, Antimony, Cinnabar. *Fourteenthly*, Preparations of Minerals, as Aurum Diaphoreticum, Aurum Potabile Commune, D. Anthonij, Quercetani, Balickij, Grulingij, Clof

Clossai, Mynsichti; Tinctura Auri, Basiliana, Flores Auri: Sal Auri Kestleri, Basilij, Quinta essentia auri Fabri, Ens Venoris, saccharum saturni, spiritus Mercurij Hartmanni; Oleum Mercurij Diaphoreticum Quercetani, Bezoardicum Minerale Crollij, Bezoarticum solare simplex & compositum nostrum, Panacea Mercurij Diaphoretica, Laudanum Minerale, Hercules Bovij ad gr. iij. Aurum Vitæ Hartmanni, Sennerti, ad gr. iij. iv. vi. Mercurius dulcis, Manna Mercurij, Sulphur Mercurij, Tinctura Antimonij Basilij, Fabri, Mynsichti; Balsamum Vitæ Basilij, Tinctura Vitri Antimonij Hartmanni, Tinctura Magistralis Antimonij, Tinctura Sulphuris Antimonij, Antimonij rubri, florum Antimonij Vitriolati, Tinctura seu Antidotus Antimonij aurea; Tinctura Antimonij cum Auro: Antidotus Antimonij Quercetani, Panacea Sulphuris Antimonij, Nix Antimonij Diaphoretica, Vitrum Antimonij Diaphoreticum, Antimonium Diaphoreticum, Precipitatum Antimonij Diaphoreticum, Sal Antimonij, flores Antimonij albi, flores Antimonij Diaphoreticæ Salæ, Leucoia Lutea Paracelsi, Hedychrum Antimonij, precipitatum Cinnabris Diaphoreticum Schroderi; Extractum salis, Olenum salis commune, Antidotum Salis, spir. salis Clossai, Crystalli salis dulcis, flores salis, Sal Armoniacum, Crystallus flores, & spir. salis Armoniaci, spir. salis Armoniaci Clossai, Lapis seu sal Prunelle, Nitrum Perlatum, spiritus Nitri dulcis, Tinctura Vitrioli Cyprij Clossai, Oleum Vitrioli simplex, & Diaphoreticum, spiritus Vitrioli Vulcerarius, sal Tartari

Nitratum, Tinctura salis Tartari: flores sulphuris Vitriolati, Lac sulphuris Clossai, Balsamum sulphuris Anisatum, Tinctura sulphuris Clossai, Crystalli sulphuris, Essentia sulphuris, Oleum sulphuris per Campanum, Clossai, & Aureum, spiritus Suphuris Vulnerarius, Hedychrum sulphuris, Essentia Ambraë Grisæ, Diaphoreticum succini Magisterium, flores, Tinctura, Essentia spiritus, Sal, & Syrupus Corallorum; Magisterium, flores, Tinctura, Essentia, spiritus, sal, & Arcanum Perlarum; Magisterium, spiritus, & Oleum Terræ Lemniæ & sigillatæ. Fifteenthly, to all the aforementioned add those which we have enumerated at § 6. foregoing. § 11. These Medicaments are Sudorificks, Alexipharmicks, Cordials, and Antidotes against the Plague: from among which you may chuse the most powerful or most fit for your Intention (for always the strongest things are not the best:) or if you like not the simple Prescriptions, you may out of them make others, either Compound or Decompound, as your occasion or necessity may require: In doing which, if you affect Acids, the Medicament may be never the worse, for they produce such effects as are certain, by comforting the Heart and Spirits, rectifying the Mass of Blood, & freeing it from the malignity and venom which infects it: by dissolving the pituitous matter which is lodged in the Stomach and Bowels: by correcting Choller; and following the Disease through all its Protean shapes and disguises in which it assails the strength and life of Man kind. When the

Di.

Disease is the more gentle, you may use the more gentle Medicaments: but when it is violent the more strong. The Medicine according to its form, may either be swallowed alone, or mixt with some proper Julep, and the sick (being in Bed) must be put to Sweat: in which you must be cautious, that the Sweat be continued six, eight, ten, fifteen or twenty hours, as the sick can endure it: the Sweating Medicine may be given twice a day; or thrice in twenty four hours; between which times you ought to have some pleasing Cordial Julep, to refresh the Spirits with, made of Juyce of Citrons and such like things, but you must beware of things which refrigerate too much, whilst the Sick is in the Sweat, least the Sweat should strike inward, and the Venom be conveyed to the Heart, from whence follows sudden Death: An hour or two after the Sweat is taken, give the Sick Mutton or Chick Broth or some Alexipharmick Poffet drink, and then let them Sweat well, wiping it continually gently off with a warm Cloth, applying also other hot ones to the Breast, Stomach, Bowels and other parts forbearing also to shift the Patient, but as he cools, to dry his shift with the said hot Cloths, put between his Shift and his Skin; you ought to Sweat every day, till you find the malignity of the Disease abated; afterwards every other day; then every third or fourth day, as you see occasion: and this you must do for some time, least the

Poyson of the Disease revive and surprise you again. § 12. *But that we may not leave the young artist in the dark, we will condescend, to give some examples in Compounding proper Antidotes; from the Instances whereof, you may institute a thousand others at pleasure.* First, *R Venice Treacle ℥ss. Salts of Scordium and of Rue, A. ℥ss. Bezoar Mineral gr.vj. mix. giving after it a little Carduus or Treacle Water.* Secondly, *R Confectio de Hyacintho, Diascordium, Venice Treacle, A. ℥ij. Extractum Bezoardicum Quercetani ℥j. Spirit of Salt gut.x. mix them.* Thirdly, *R Electuarium de Ovo ℥ij. Salt of Scordium ℥j. Salt of Vipers gr.vj. Bezoar Mineral gr.iv. mix for a Dose.* R Fourthly, *Mithridate ℥j. Diascordiam ℥ss. Pulvis ex chelis Cancrorum ℥j. mix them.* Fifthly, *R prepared Coral, Pearl, shavings of Ivory, Hartshorn, Bezoar Stone, A. ℥j. make a fine Poulder of which give gr.xvi. every time they take any Broth.* Sixthly, *R Bezoar Minerale ℥ij. Sal Prunellæ ℥ij. Camphir ℥j. make a Poulder, of which give ℥j. at a time in Carduus or Treacle Water.* Seventhly, *R Elect. de Ovo ℥ss. Smaragd Stone prepared, Oriental Bezoar, Agr.vj. Hyacinth prepared gr.iiij. make a Poulder and mix with the Electuary for one Dose.* Eighthly, *R Diascordium ℥iv. sal prunellæ ℥j. salt of wormwood ℥ss. Prophylactic Water of Sylvius, Carduus-water, syrup of Barberries, A. ℥j. mix for a draught.* Ninthly, *R Treacle-water ℥ijss. Carduus-water ℥ijss. Mithridate ℥ss. Zedoary ℥j. mix for a draught.* Tenthly, *R Mead sweat and*

Carduus-water, A. ℥ij. juyce of Limons ℥j. Old Venice Treacle ʒss. ad ʒj. (as the sick is more or less hot) mix, give it warm, and cause them to Sweat: But new Treacle will be best, if the Symptoms be vehement. Eleventhly, Take Barbers Alexipharmick powder ʒj. salt of Coral gr. xvj. Tartar Vitriolare gr. viij. Confectio Alkermes ʒss. Prophylactick water of Sylvius ʒjss. *Carduus and Rue water*, A. ℥ij. mix for a draught. Twelfthly, In the beginning of the Disease, Riverius saith, That you may especially use *Laudanum*, given to gr. ij. mixt with other Antidotes, as ʒ Treacle-water ʒjss. *Laudanum* gr. ij. dissolve the *Laudanum*, mix, and give it. Thirteenthly, ʒ *Aqua Bezoartica Langij* ʒss. salts of Wormwood and Scordium, A. gr. iv. *Laudanum* gr. ij. dissolve, mix, and give it. Fourteenthly, ʒ *Aqua Epidemica* ʒj. *Aqua Cordialis frigida Saxonie* ʒjss. Salt of Scordium gr. vi. *Laudanum* gr. ij. dissolve and mix. It is the opinion of Riverius that *Laudanum* by its Narcotick and Congealing power fixes those fervent Spirits so Vexatious to the Heart; and quiets the Morbifick matter, which while it is in Motion is most pernicious; so that Nature not being provoked by the malignant humours and spirits, recollecting her Strength, does the more easily joyn her self with the Vertue of the Antidote and so overcome: Barbet also saith, That its use is very requisite in all malign Feavers, and is famous for dispelling of Poyson; nor do I believe (saith he) that there

can any other Medicine be named, which gives so present relief to the Patient: in case of want of rest, this following prescription is good to be taken every quarter of an hour by a Spoonful, till sleep teizes. Fifteenthly, ʒ *Prophylactick water* ʒjss. *Borage-water* ʒj. *Cinnamon-water*, Lozenges of Sugar pearled, A. ʒij. Confectio of Hyacinth ʒj. *Laudanum* g. ij. mix them. Sixteenthly, ʒ *Antimony Diaphoretick* ʒj. Salts of Scordium and Rue, A. ʒss. Bezoar Mineral gr. vj. Treacle-water, Fumitory-water, Julep of Roses, A. ʒj. mix for a draught. Seventeenthly, ʒ Barbers Prophylactick Conserve ʒjss. prepared Crabs Eyes ʒj. Prophylactick-water, Elder-Vinegar, A. ʒjss. Syrup of Limons ʒj. mix for a draught. Eighteenthly, ʒ *Mixtura simplicis* ʒj. Salts of Vipers, Scordium and Rue, Agr. vj. Bezoar Mineral gr. viij. mix them. Nineteenthly, ʒ Bezoar Mineral, Antimony Diaphoretick, Crabs-Eyes prepared, shavings of Ivory, Agr. vj. mix them. Twentiethly, ʒ the Pestilential Extract of Schroder or Zwelfer ʒss. Troches of Vipers, or Viper Powder ʒj. Bezoar Mineral gr. viij. Salt of Rue, gr. vj. mix them. Twenty first, ʒ *Mithridate* or Venice Treacle ʒj. Bezoar Mineral gr. x. Treacle-water, *Carduus-water*, A. ʒj. mix them. § 13. But among simple things, *Lapis porciaus*, (a Stone generated in the Gall of a Hog, and brought to us out of the Indies) is of very great use, especially if it be steeped a while in your ordinary Drink; it strongly provokes Sweat, and very much refreshes the Heart: it

it is a very hard Stone, yet every time it is infused abates somewhat of its quantity, which is discovered by the Tincture which it imparts to the Liquor: here also the *Hircinian Unicorn* is commended: The Blood of a *Rhinoceros* gut. v. given in Sorrel Water: a bit of his Hide boyled in Sorrel-water, in which afterwards red hot Gold has been quenched: The juyce or Pulp of the *Brazilian* fruit called *Muracujao basu*: The *Molucca Berry* in Pouder *ad gr.v.* in Sorrel or Rose-water: the juyce of *Galega* given *ad ℥iij.* The Pouder of *Emeralds* prepared with *Bezeare stone*, *A. gr.viii.* *Hyacinths* prepared *à gr.vj.* *ad xij.* of particular Compounds, the Syrup of *Bawm of Fernelius*; *Septalius* his Syrup of *Goats Rue*: *Quiddony* of *Elder-berries* with *Treacle Vinegar*, *Pestilential Extract of Crollius*: The *Diascordium* of *Fracastorius* given *ad ℥iij.* especially to *Women with Child*: The famous *Indian Composition* of *Cachunde* given *à gr.xij. ad xviii* or *xx* see it in *Our Doron lib.2. cap. 24. sect.* . But above all we commend *Our Theriaca Londinensis*, or *New London Treacle* (whose Preparation and Virtues see in *Our Pharm. lib.4. cap. 22. sect. 62.*) which we have successfully given to more than a thousand people, taken sick with the *Plague*; and therefore here commend it as the most universal Antidote, from so great and large experience: you may give it *à ℥j ad ℥j* or *Div.* either alone or dissolved in *Sack*; the sick being in his naked Bed, and Sweating

upon it, giving between whiles a little *Confectio Alkermes* of *Our* prescription. § 14. Now in the use of these things you must observe, That hot Antidotes are to be tempered with things of a cooler Nature: That the strongest things are not to be given to *Women with Child*, nor to *Children*: That such as have weakness in their *Stomachs* and *Head* ought to abstain from *Camphorated Medicaments*: That some Medicament or other must be given three, four, or five times in twenty four hours space: That you ought to have divers Antidotes in a readines: and to change them very often especially at first, least Nature being too much accustomed to one and the same thing, should slight the Virtue thereof: That the nature of the pestilent Venom is not always one and the same, but very different according to the diversity of the *Patients Bodies*; whence, what helps one may do another no good; for which cause variety of Antidotes are to be taken one after another: That *Waters*, *Spirits* and such other *Volatile things*, as will most easily penetrate must be principally given: That the sick must abstain from *Sleep*, till he or shee has undergone two *Sweats*: That while the *Sweating* lasts, the *Spirits* are to be refreshed with juyce of *Citrons*, *Carduus water*, *Conserve of Wood-Sorrel*, *Confectio Alkermes*, &c. That the *Sweat* being finished, cold Air is to be avoided, and the Sick is moderately to be refreshed with Food: That if Nature seems to be

be overcome, you must exhibit the strongest Antidotes, and in a large Dose : such as are most Spiritual, Volatile, and have power to penetrate, adding also Camphir, which will much help their penetration: That although the Sick is very Costive for several days, with pain at Heart, yet you are to give no Purge ; if you desire a little to open the Body, do it with a Suppository rather than with a Clyster, which is not altogether so safe, but has been prejudicial to many on this occasion : That Juleps, although very necessary, be not made use of by all persons at all times : but when they are prescribed, let them be fortified with some good Sudorifick : That if the Disease is accompanied with drowsiness, you use Opiats with a great deal of Caution, or rather give this, *Rx Sal Prunellæ, Salt of Rue, of Scordium. of Tatar Vitriolated, A. gr. x Camphir gr. iv. Treacle-water, Bawm and Orange-flower-water, Syrup of Betony, A. ℥j. mix for a draught, and therewith provoke Sweat :* Or, *Rx Carduus-water ℔j. Aqua Alexipharmica ℥iv. Julep of Roses ℥iij. Spirit of Salt gut. viij. mix them.* Or *Rx salts of Scordium, of Carduus, Antimony diaphoretick, A. ℔j. Bezoar Mineral, Crabs-Eyes prepared, A. gr. viij. Treacle-water, Mint-water, Syrup of Citrons. A. ℥j. mix for a draught.* Or this, *Take Diascordium ℥j. Confect of Hyacinths, Lapis Prunellæ, salt of Scordium, A. ℔j. Treacle-water ℥j. Betony-water, Carduus-water, A. ℥jss. Syrup of juyce of Scordium ℥j. mix for a draught.* Or, *Rx Pe-*

nice Treacle, Diascordium, A. ℥jss. salt of Carduus ℔j. Syrup of Limons ℥vj. Treacle-water ℥j. Aqua Bezoardica ℥ss. mix for a Potion : Or *Rx sal Prunellæ, salts of Wormwood, Scordium, Antimony Diaphoretick, A. ℔j. Aquæ Angelicæ magis Compositæ, Treacle-water, Syrup of juyce of Carduus, A. ℥j. mix them for a draught.* That, if there is a violent pain of the Head, you may apply to the Nape of the Neck Ground Ivy bruised, and to the Palms of the Hands and Soles of the Feet this : *Rx Rue M. jss. Sour Leaven ℥ij. Pigeons Dung ℥j. Common Salt ℥ss. Vinegar enough to make it into a Pulvis :* That if there is a Violent Vomiting and Hicough, you must give this ; *Rx Aqua Bezoardica, Mint-water, A. ℥jss. Cinnamon-water, Syrup of Myrtles, A. ℥ss. Quince essence of Wormwood ℥ij. Confection of Hyacinths ℥j. Salt of Coral ℔j. Salt of Wormwood ℔ss. mix them and anoint the Stomach with Oyl of Nutmegs expressed, Oyl of Mace and Wormwood distilled, A. ℥j. being mixed together ;* If the Vomiting be never so extream, Riverius saith, it is suddenly cured (as it were by a Miracle) by exhibiting a drachm of salt of Wormwood, in a spoonful of fresh juyce of Limons : That in a great flux or Loosness, (which is usually a sign of Death) great caution is to be used ; because if it is unseasonably stopped, the Venomous matter is kept within : and yet if it be let alone, it endangers the drawing the Poyson inwards and so hastens the Death of the sick ; if it be moderate exhibit

exhibit strengthening Clysters; if it be immoderate, by which the Sick is as it were melted away, you must boldly stop it, which may be done with *New Venice Treacle* ad \mathfrak{ss} . or with *Laudanum* ad gr.ij. or iij. or with prepared *Emeralds* ad gr.xij. or with the most powerful *Diaphoreticks* in a very great Dose, which sometimes stop it as it were in a moment, by expelling the Poysonous matter to the Skin, which fretting the Guts and other Bowels did cause such a melting and consuming looseness: *Barber* gave this: \mathfrak{R} *Diascordium* \mathfrak{z} ij. red Coral prepared, *Dragons Blood*, A. \mathfrak{z} ij. *Amber*, prepared *Pearls*, A. \mathfrak{z} ls. *Fennel Water*, *Syrup of Comfrey* of *Fernelius*, A. \mathfrak{z} i. *Plantane and Rose water*, A. \mathfrak{z} iss. mix them and give it by Spoonfuls: That where Worms are bred by the great putrefaction of humors, they are to be drawn away by sweet Clysters: and by Potions made of a Decoction of *Scordium*, which is also good against both Malignity and Worms, in which Decoction you may boyl *Sorrel* or *Hartshorn* calcined; also *Burnt Hartshorn* may be given ad \mathfrak{z} j in a proper Julep. Lastly, That in the whole Course of the Cure, the greatest care of all must be to preserve the Patients strength, which is overthrown by the Poyson of the Disease, for which purpose you may give Broths made with a Capon: *Aqua Caponis* made in B.M. per descensum as we have taught in Sect. 14. §8. aforegoing: Gelly of *Hartshorn*, *Confectio Alkermes*, de *Hyacintho*, and lastly now and then a little

Sup of choise *Canary*, or a Toast dipt therein. § 15. All these things being thus far observed and done, that we may not seem to be wanting in any thing, we must come to the Application of Topicks: Among which Cupping-Glasses and Vescatories are of good use, the first applyed both with and without Scarrification; these things you may do in the State of the Disease, and at the time when Sudorificks are given, for they powerfully help to bring out the Poyson into the Surface of the Body. Anointing with Oyl of *Scorpions* of *Mathiolus* is much commended by all Practisers, for it draws forth the Poyson from the very profound parts, unto the outward parts: you may apply it to the Temples, Arm-pits, Stomach, Hands, Wrists, Feets, Groins, and anoint therewith four, six, or eight times a day: for want of this Oyl anoint with a Liniment made of *Venice Treacle*, *Saffron*, *Camphir*, and juyce of *Lemons*: if Thirst, dryness of the Tongue, and a violent burning, restlessness and inquietness with Watchings be present, apply a Hen or live Pigeons cut down the Back; or the Lungs or Cawl of a Sheep, newly killed, to the Belly; also Pigeons may be applyed to the Palms of the Hands, Soles of the Feet, and Region of the Heart: foment also the Stomach, Hypochondries and Genitals with *Conf. Alkermes* dissolved in *Canary*: The Vescatory may be applyed to the Neck, Shoulders, Arms, Thighs, Legs, &c. In the state of a *Frensy*, or in the be;

beginning or the Declination, resolvers are to be applyed, especially living Creatures and their parts: the Lungs of a Sheep are better than young Pigeons or Whelps, because they softly encompass the whole Head, and partly ripen and digest evil humors contained in the Brain, that Nature may afterwards the more easily expel them: but these things are not to be applyed in the beginning of a Phrenzy, because by increasing the heat, they increase the flux of humors to the Brain, and the Raving: In Inflammations, dryness and blackness of the Tongue, use juyce of Housleek with *sal Prunella*: Or *Rx fresh Butter* ℥ij. *sal Prunella* ʒss. mix them and keep the mixture in cold water: give the quantity of a Hasle nut oftentimes in a day, letting the sick hold it in their Mouths as long as possibly they can: *Mindererus* commends it as an absolute thing; the sick may also Gargarise with warm Milk, because it cools the Inflammation, moistens the Part, and attracts the Poyson to it. § 16. *The malignity being now overcome, the Poyson expelled, the Feaver abated, and the Bubo's or Carbuncles (if any be,) broken and running by the remedies aforesaid, whereby it is apparent that the Disease does decline, and manifest signs of Concoction do appear, (which is scarcely till after the fourteenth day, we must then come to Purgation, which is to be accommodated to the Strength and Constitution of the Sick: for this purpose you may use Tincture or Infusion of Sena, or*

of Sena and Rhubarb; or the Tinctura Cathartica Classis, or some one of those of Grulingius, which may be given in clarified Whey: Or you may give this, Rx Sena (in White Wine infused) ʒiij. syrups of Roses solutive and of Buckthorn, A. ʒvi. mix them. Or Rx Infusion (of Sena ʒiij.) syrup of Buckthorn ʒiv. syrup of Roses ʒj. Borrage-water ʒij. salt of Tartar Viriolate, gr. xij. mix for a Dose. These purges ought to be repeated three, four or six times at convenient distances (as you see occasion) that all the malign and evil humours may be perfectly rooted out, otherwise there will be danger of a Relapse, or that the Sick may be long in recovering their perfect Health.

III. The Cure of the Symptoms of the Plague.

§ 17. *The Symptoms of the Plague are chiefly four, viz. The Burning Feaver, Bubo's, Carbuncles, spots or Tokens so called, of all which we shall Treat in order. § 18. The Cure of the burning Feaver. The Feaver if it be not vehement, will go off with the Sudorificks formerly described against the malignity Poyson and Contagion of the Disease; and for the Cure of which you need seek for no other remedies: but if otherwise, it be very violent, so that it needs a particular regard, which is known by extream Burning, vehement Thirst, and great dryness of the Tongue: Here pleasing Juleps, gently refrigerating (but*

(but always mixed with Sudorifics) are to be administred, of which kind are these following. *R Waters of Borrage, Bugloss, A. ʒij. Treacle water ʒijss. juyce of four Oranges, of Citrons, A. ʒij. spirit of Hartsborn gut. xij. Oriental Bezoar gr. x. julep of Roses enough to make it pleasant: Dose j. spoonful often, it quenches thirst excellently. Or, R Carduus Water ʒij. Treacle-water ʒij. Syrup of sower Pomgranates and of Limons, A. ʒj. Salt of Hartsborn gr. xx. mix them. Or, R roots of Sorrel, Bugloss, Tormentil, A. ʒj. leaves of Endive, Succory, Sorrel, Pimpernel, A.M. j. Tamarinds ʒj. boyl in Barly-water to ʒij. strain, and add syrups of Pomgranates and Limons, A. ʒijss. Confectio de Hyacintho ʒij. Bezoar stone gr. xvij. mix for three Doses: if the Feaver be violent add to every Dose sal Prunellæ à ʒss ad ʒj. and gut. vj. of Oyl of Sulphur. R Almonds blanched ʒj. seeds of Mellons, Gourds, Narew, Citrons, Carduus, A. ʒij. of the former Decoction ʒijss. make an Emulsion in a Marble Mortar, to which add syrup of Limons ʒij. sal Prunellæ ʒij. give it at three times, viz. Morning, Noon, and Night, or else by Spoonfuls. Or, R Roots of Scorzonera, Butterbur, A. ʒj. Sorrel leaves M. ij. boyl in Barley-water q. s. strain, and to ʒij. thereof add Syrup of Violets ʒij. sal Prunellæ ʒij. spirit of Salt gut. xij. mix them. Or R Carduus Water ʒij. Borrage water ʒij. Bawm-water ʒij. Rose-water ʒj. Lozenges of sugar pearled ʒvi. Bezoar Mineral gr. vj. Ambergrise gr. ij. Musk gr. j. juyce of Citrons q. s. mix them. Or, R Borrage,*

Bugloss, Angelica and Poppy-waters, A. ʒij. Aqua Bezoartica Langij ʒij. Aqua Cælestis (which is the Aqua Vitæ Matthioli) ʒj. Syrup of Poppies and Limons, A. ʒijss. Bezoar Minerale, Contra yerva, Virginian Snake-root, A. ʒj. mix to be given by Spoonfuls. Or, R Carduus-water ʒij. Aqua Cælestis ʒij. sal Prunellæ ʒij. Oyl of Sulphur gut. xvij. Syrup of Citrons ʒiv. mix, to be given by Spoonfuls: Or, R Orange-flower-water, Rose-water, A. ʒijss. Syrup of Apples ʒj. juyce of Limons ʒij. Confectio Alhermes ʒijss. mix them. If the Feaver a little abates, you may permit to such as have weak Stomachs, and a pain at Heart, the liberty of drinking (but very moderately) of a draught of Canaty, or of Mosel or Rhenish Wine, with Sugar and juyce of Limons. Or R Scabious and Carduus-Waters, A. ʒiv. Orange-flower-water ʒij. Confectio Alhermes ʒij. Diamargariton frigidum ʒj. Saffron ʒss. Camphir gr. vj. mix and give it by Spoonfuls. § 19. The Cure of the Bubo. Here that Nature may thrust forth the Tumor you must give Antidotes internally, and apply strong attractives externally; as by fixing a Cupping Glass (especially if it should strike in;) Or you may apply a Pultise of Radish-roots and Scrophulary the great, with a little Salt and Vinegar. If it comes out behind the Eares, or in the Neck, you may draw it to some more ignoble part, (as some Physicians have advised) for which purpose this may be applied, R Scrophulary root the greater ʒij. Radish roots ʒj. stron-

gest Leven ʒjss. beat them together, and boyl in the best Vinegar to a Pultise, which apply to the Palm of the Hand, or sole of the Foot, on that side on which the Bubo is, renewing it three or four times in a Night. But if the Bubo is fixed that it will not stir, you may draw it with a Cupping-glass, and store of flame without Scarrification: then the Cataplasm being removed, let it be covered with an Attractive and ripening Cataplasm made of roots of Scrophulary, Salt, black Soap, and strong Leaven boyled in Vinegar. The Cataplasm of Roger Dixon: R Bay or common salt decrepitated, and ground fine, Mithridate, Figgs, A. ʒij. Castle Soap sliced thin ʒiv. add to the Soap, Oyl of Lillies enough to make it soft as an Oyntment; beat them well together, and apply it to the Part: this will not deceive you in your expectation, for it will break any Pestilential Bubo or swelling, and turn out a Carbuncle: it strongly draws out the malignity, and makes it fit to be cured by any ordinary Medicine: if the Sick be thirsty give drink of a reasonable strength. heated as hot as they can drink it, the hotter the better, and let not the sick languish with thirst, for it is very ill, the richer sort may moderately drink fragrant generous Wine, and Cordial Waters, but all small and cold Beer is forbidden. After six hours let a Cupping-glass be set on again, and let the Skin be cut with a Lancet or small Knife: The Cups being removed apply a ripening and drawing Cata-

plasm made of a great Onion hollowed, filled with Treacle, and roasted in the Embers till it is soft: Or of the middle Rind of Elder boyled in Cream, and mixed with Leven, which lay on at Night, and renew it often: Or R Oyls of Linseed and Camomil, A. ʒij. Saffron ʒj: yolks of Eggs No. ij. make an Oyntment and apply it. The next day, let the Tumour be lanced, and the bloody Water squeezed forth, upon which apply a mundifying Emplaster of Turpentine mixt with Honey of Roses: Or this, R wax ʒviii. Rosin ʒiiij. Turpentine ʒiv. Oyls of Toads and of Scorpions, A. ʒij. Liquid storax, juyce of Celandine, A. ʒss. Birtwort-root, Ammoniacum (dissolved in Vinegar) A. ʒj. mix and make an Emplaster. Barbet at first appearance, draws a Blister (without using any Cupping-Glasses, for that they cause a great deal of Pain, and create a Feaver) after seven or eight hours he cuts it, and applys unto the part *Emplastrum Magneticum H. itmanni* (made up with the Arsenical Magnet) than which he professes he knew not any thing more excellent, see it in *Our Pharm. lib. 5. cap. 6. sect. 82.* He saith it leaves not the least sign of a Scar, yet plentifully draws forth the malignant Humour, so that in five or six days the Bubo will be utterly taken away, but then there ought a Blister first to be raised for evacuation of the Humour, yet in Children it will do without a Blister. This Emplaster having produced an Escar, which is of wonderful thickness worth
 O o o the

the consideration, it may be much sooner separated than other Crusts caused by Art: for in the space of twenty four or thirty six hours (if no Scarrification hath preceded) it may easily be taken off without any, or at least with very small pain by applying any *Antipestilential Emplaster with Treacle*, or *Unguentum Basilicon*; or else by Severing the Escar, which may be much promoted by this Oyntment. *Rx Honey, Ducks-grease, Turpentine, A. ʒj. Soot ʒvj. Treacle ʒiiij. yolks of Eggs N^o. ij. Oyl of Scorpions q.s.* make an Oyntment. If the Tumour is not enough abated after taking off the first Crust, you must apply the *Magnetick Emplaster* again, the second and third time, and proceed as before. If you cannot get the *Magnetick Emplaster*, you must use the *Emplastrum Divinum*, taking care first to raise a Blister; you will find it an excellent thing in this Case. If neither the *Magnetick* nor *Divine Plaster* will do, you must use that of *Roger Dixon*, aforementioned: Or this, *Rx unslaked Lime, black Soap, A. q. s.* mix them, and apply it: the *Bubo* being now opened, it ought to be kept Running for five or six Weeks that you may be sure that all the malignity is come forth: Than the *Cataplasim of black Soap*, *Barber* saith, That he knew none more Corrosive, or that causes less pain, and that it was much better than an Actual Cautery. Some advise to apply dried *Toads*, pricked through, and steeped in *Vinegar*, repeating the same; or to anoint with *Balsam of*

Sulphur, or with *Balsamum Polychrestum*, but especially with *Butter of Antimony*. In the beginning of a *Paratiss* or rising behind the Ear, as soon as it begins to appear, the part must be relaxed and widened, and if it rises but slowly, Nature must be assisted by drawing Medicines and inward Sudorificks, as by applying Whelps, young Pigeons, Leaven, Figs, Onions, Doves-dung, adding to them Butter, Hens-grease, Hogs-grease, Oyl of Lillys, Oyntment of *Althea*: And because the part is not able to receive the Morbifick matter, to derive another way a Portion thereof, by a *Vesicatory* applyed to the Nape of the Neck, giving Sudorificks also inwardly; the matter being called forth, suppuration is to be endeavored by a *Cataplasim of Althea roots*, of *Lillys* and *Onions* with *Figs*, *Linseed Meal*, and *Oyl of Scorpions*; the Tumor being separated let it be opened and digest the rest of the matter by continuing a *Cataplasim*, or laying on *Diachylon*; let the Ulcer be cleansed with the common Digestive made of *Turpentine*, *yolks of Eggs*, and *Oyl of Roses*; after keep it long open with a Tent, that all the Poyson of the Disease may be drawn forth, at last heal and cicatrize it.

Note, if the malignity be great and very intense, or if the Tumour does so increase, as to cause danger of Suffocation or Choking, it must be opened before it is perfectly ripe, that part of the Venom may expire, which is indeed the saving of many Patients Lives; so also *Bubos* of the Groyn are opened before they come to

Suppuration. The Parosis is the most dangerous of all Pestilential Buboes (because of the straitness of the part) in so much that most Dye with them, not having them Critically, or in the declination of the Disease; yet *Riverius* saith, That by Bleeding the sick several times, a little at a time; as Zijj. and purging them the next day with *Sena*, *Rhubarb*, and *Syrup of Roses*, and then bleeding again &c. as many as were thus ordered happily recovered, not so much as any one dying; though all that had those Swellings dyed before. See *cap. 24. sect. 2. and 22.* of this Book aforegoing. § 20. The Cure of the Carbuncle. Upon the Appearance of the Carbuncle Internal Antidotes are to be given: Outwardly, the Tumor is to be Scarified on every side round about with deep Gashes, and to be fomented a while with warm Salt water: but some thinking this to be too cruel, do reject it, and chuse rather a potential Caustick, or the raising of Blisters: you may apply a grain of a Caustick to the middle of the Pustle; and upon the whole Swelling, you may lay this Cataplasim: $\text{R Ric. Scabious, A. M. i. dyed Figs N.º. vi. Syrup Leven Zj. Pepper poudred Zj. Yolks of Eggs N.º. ij. beat all into a Pultise and apply it two days together: then lay on the following: R juices of Comfrey, Scabious, Malagolds, A. Zj. Old Treacle Ziv yolks of Eggs N.º. ij. mix and apply to the Tumour. Some advise tooint with Butter of Antimony which is a good Caustick, or with Agricola his Oyl of Mercury: or to apply the Magnettick Pla-$

ster of Hartman, which in this Case is found of great Virtue. Now to the Eschar, (that it may be separated) apply Unguentum Basilicon mixed with Treacle, Oyl of Scorpions and the yolk of an Egg upon the Eschar (that its falling off may be hastned) lay Unguentum Basilicon mixed with Butter and Turpentine: Or this of Barbet, $\text{R Comfrey-roots dried Zij. Althæa roots dried, Meals of Linseed and Wheat, A. Ziv. Scordium dried Zijj. make all a fine Poulder: put to them Water q. s. boyl to make a Mucilage, and till it is as thick as a Pultise, to which add, Honey, Turpentine, Unguentum Apustolorum, A. Zijj. Basilicon, Tar, Venice Treacle, A. Zij. yolk of one Egg: Saffron Zs. mix and make a Cataplasim. When the Crust is fallen off, cleanse the Ulcer with this, $\text{R juices of Centory, Parsley, Wormwood, Scabious, A. Zj. Myrrh, Aloes, Sarcocol, Orrice, A. Zj. Turpentine Zs. Honey of Roses Zij. make an Oyntment, which apply till the Sore is perfectly healed: See more in cap. 24. sect. 3. aforegoing. § 21. The Cure of the Spots or Tokens. We are loth to determine the persons having these Spots upon them to be incurable, because many who have had them, to our Knowledge have recovered, and several credible Authors testify no less: yet this we say, that in whomsoever they appear, their case is very dangerous, and for the most part Mortal; because they proceed from the greatest and highest putrefaction and malignity, and an universal and mighty overthrow of the Vital and Animal powers:$$

so that unless some extraordinary and powerful Antidotes be speedily given, there can be no hopes, that, almost destroyed Nature, should of her own accord and force, be ever able again to out-force or contend with her Adversary. The Spots (saith Barbet) which usually portend some Mischief, can scarcely be any other way better removed than by inward remedies: In the Case of a young Man he gave this: *R. salts of Scordium, of Carduus, A. ʒj. Antimony Diaphoretick ʒss. Crabs-Eyes bruised gr. xij. Prophylastick-water of Sylvius, Mint-water, syrup of the juyce of Carduus, A. ʒj. mix for a draught*: by the use hereof the Feaver abated and the young man in short time after recovered. *Paræus lib. 22. cap. 29.* saith, That drawing Medicines must be applied outwardly, and Sweating Medicines must be given inwardly: also he approves of the *Unction of Quick-silver*, that Nature being strengthened therewith to stir up the Expulsive faculty, might unload her self of some Portion of the pestilent & venomous humor by opening the Pores and passages, and letting it break forth into Spots and Pustles, and into all kind of Eruptions. He anointed many, where the passage for the poysonous matter was slow, loosning their Bellies with a Clyster, and giving them Treacle-water to drink, which might defend the Heart, but not distend the Stomach, and so he obtained his expected purpose. Instead of Treacle-water, you may use a Decoction of Guajacum, which doth heat, dry, provoke Sweat, and resist Putrefaction,

adding thereto also Vinegar, that the Subtilty thereof may pierce the better, and withstand the putrefaction: and here the saying of prudent Celsus is (if ever) seasonable; *that it is better to experiment a doubtful remedy, than to leave the sick to certain danger: and that many things are rightly done in time of eminent danger, which are otherwise to be omitted.* The Unguent of Paræus: *R. Hog-lard lbj. (boyled with Leaves of Rosemary, Sage, Time;) Quick-silver ʒv. boyled in Vinegar: sal. Niter ʒiij. yolks of three Eggs boyled hard: Treacle Mithridate, A. ʒj. Turpentine, Oyl of Scorpions and Bays, A. ʒiij. mix all together in a Mortar, and make an Unguent, wherewith anoint the Arm-holes and Groins, avoiding the Head, Breast and Back-bone: then lay him in his Bed, cover him warm and let him Sweat two or three hours; after wipe and cleanse his Body, remove him into another Bed, refresh him with Capon-Broths, reere Eggs, and such like Meats of good juyce, easy to be concocted and digested; anoint him again the second, and if you see need the third day; if he fluxes at Mouth, it must not be stopped; when he has made an end of Sweating use convenient Diuretick Medicines, that thereby the reliques of the matter of the Spots (which happily could not all breath forth,) may be purged and carried off by Urine. *But the things which we have had experience of, and that many times; Our New London Treacle, which we commend above all other Antidotes, and than which we have**

yet met with nothing more excellent, but some persons which we cured of the spots therewith, we caused several times to be anointed all over with Oyl of Scorpions, for as much as that Oyl helps to draw also the Venomous matter outwards.

XXII. Continual Symptomack Fevers.

§ 1. The Cure of Lipyras, a Fever arising from some great inflammation or Erysipela's of some internal part. If the Phlegmon or Inflammation be of the Throat, as in a Quinsley, you must Cure it, as we have taught cap. 29. sect. 25. If it be of the Brain you must Cure it by cap. 29. sect. 28. If it proceeds from a Plenrify see cap. 30. sect. 3. If from a Peripneumonia, see cap. 30. sect. 4. If from an Inflammation of the Stomach, see cap. 30. sect. 27. If from the Chollick, see cap. 31. sect. 1. If from the Inflammation, of the Guts, see cap. 31. sect. 24. If from an Inflammation of the Mesentery, see cap. 31. sect. 36. If from Inflammation of the Liver, see cap. 31. sect. 39. If from Inflammation of the Spieen, see cap. 31. sect. 46. If from a Nephritis, see cap. 31. sect. 51. If from an Inflammation of the Bladder, see cap. 31. sect. 53. If from Inflammation of the Womb, see cap. 31. sect. 73. If it be from an Erysipelas, see cap. 24. sect. 6. Now this is to be noted, That unless you cure or remove the Disease causing the Fever, the Fever will not be driven away, do what you can; for as much as otherwise the first cause will be still present, but this is necessary that with all those things, you mix Antifebricks, such things in particular as are

good against Continent and Continual Fever: but in these Cases you must beware of too great coolers, and give things refrigerating with very great Caution.

§ 2. The Cure of the Fever arising from the corruption and putrefaction of some Bowel. If it comes from Ulcers or Fistula's of the Lungs, Omentum, Mesentery, Womb, &c. the Cure is to be directed to those Diseases: A good Vulnerary Diet is to be prescribed, with which you ought to mix Antifebricks: if the sick should drink Milk it ought to be mixt with Water, and sweetned either with Salt of Tartar, or Honey or Sugar of Roses; if the Ulcer or Fistula has been old or of long standing it will be good to mix with every pint of Diet (as it is drunk) about ʒij of Spirit of Wine, it is of admirable Virtue and force in Curing such degenerated and inveterate Maladies.

§ 3. The Cure of Febris Anomala, Febris Lenta, The irregular, slow, or lingering Fever. You must regulate the Cure according to the Nature of the Cause and Symptoms. You may first open with this, R̄ Bawm, Angelica and Cinnamon-waters, A. ʒij. Lettice and Purslane water, A. ʒiij. Syrup of the juyce of Nettles ʒijss. spirit of sal Armoniac gut, xxvj. mix them. This done, if you find the Stomach afflicted, Vomit with Sal Vitrioli or Sal Tartari Emeticum Mynsichti, or with Asarum Roots given ad ʒj. in Pouder: but if the Stomach be free, you must purge gently with Syrup of Rhubarb with Succory, or with Cassia, Electuarium Lenitium, Diaprunum

with *Sena*, *Catholicon*, Decoction of *Tamarinds*, *Myrobalans*, &c. according to the Constitution of the Body : Or you may use the *Tinctura Cathartica Clossai*, *Catholica*, *Phlegmagoga*, *Cholagoga* & *Melanagoga Grutingsij*, which you are not to give alone, but mixt either with *Decoctum aperitivum majus* or *minus* : or with the *Infusum seri lactis* first or second ; or with Whey clarified with *Borrage*, *Bagloss* and *Succory*. Then you are to exhibit again *Aperitives*, *Attenuaters* and *Dezergents*, chiefly such as are appropriated to the parts afflicted ; and the sick ought sometimes also to go into a warm Bath of fair Water, which is of singular use. Lastly, you are to exhibit things *Cordial*, *Corroborating*, and *strengthening* the Universal frame ; as *R. Elect.* ad *Tabidos*, *Conserves* of roots of *Angelica* and *Eryngos*, *Conserves* of the flowers of *Borrage*, *Bagloss*, *Rosmary*, *Endive*, and *Cowslips*, *A. ʒij.* *Confectio Alkermes*, *Sugar of Roses*, *A. ʒiij.* *species diatragacanthi frigidij*, powder of *Vipers*, *A. ʒjss.* juyce of *Wood Sorrel*,

q. s. make an Ele&uary. § 4. *The Cure of a Surfeit, arising from cold, too much eating or drinking, corrupt Milk, putresfed Blood by violent Sweating, or from Worms.* If the Surfeit be recent, or newly taken, and the Stomach be afflicted, you ought immediately to Vomit, and that once, twice or thrice : which may be done by giving ʒj of *Sal Trioli*, and after a while provoking it with a Feather : the Vomit being over, wash the Bowels with Mutton or Chicken Broth : at Night exhibit an Emollient and Laxative Clyster, as the *Enema Emolliens Schroderij*, the next Morning give *Hiera picra cum Agarico* à ʒj ad ij. which you may mix with *Catholicon* ʒss. or more. If you fear Worms you may mix with the said Dose *Mercurius dulcis* à gr. x. ad xx. repeat once or twice more (as you see occasion) the Clyster and Purge ; at last comfort the Stomach and Bowels with Tincture of *Roses* : Or Tincture of *Red Poppies* in S.V. Or with *Aqua scordij Composita* and *Wormwood Wine*.

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Liber Quartus.

By *WILLIAM SALMON*, Professor of Physick.

LONDON,

Printed by *Tho. Dawks*, 1680.

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Printed by The Daily, 1880

SYNOPSIS MEDICINÆ.

LIBER IV.

The Anatomicks.

CHAP. I. Of Anatomy in general ;
and of a Part.

I. Ἀνθρωπολογία, ἔξ Ἀνατομικῆς τέχνης, Ἀνατομία, Ανατομή, *Anatomia*, Anatomy, is that which teaches to dissect, unfold, lay open, and inspect the Body of Man.

The first appellation (*Anthropologia*) is too general for the matter intended here ; for as much as that comprehends the whole Man, who consists of two parts viz. Body and Soul : Now it is *Anatomy* which treats of the Subject of Medicine, called σῶμα ἀνθρώπου, *Corpus humanum*, The Body of Man ; but it is Ἀντολογία, which Treats of the Soul.

II. The subject of Anatomy is the whole Body of Man, and all the parts of the same Body.

The whole is that which contains the Parts ; a Part that which is contained in the whole. Now the whole is divided into parts according to their Composition, Form or End ; wherein their Names, Numbers, and Natures severally are to be considered,

with their Adjuncts, Actions, and Affections.

III. A part, is a Body joyned to the whole, solid, partaking of the Common Life thereof is nourished, but doth not nourish, is Circumscribed, and fitted for some Function, or Use.

Hence Spirits, Blood, Humors, Hair, Nails, Excrescencies, cannot be accounted as parts, for where on one side they fall within the Definition, on the other side they fall clear out. Fat also is excluded ; but the famous *Riolan* will have Fat to be a part. What is meant by Function or Use we shall here Explain. A Function or Action may be either private or publick. The private Action, is that by which each part provides for it self. The publick Action, is that whereby it provides for the whole ; and as it is opposed to use, it is the Action of the principal part of an Organ, which performs the whole Action Ex. gr. The Skin has a private Action, as to attract and retain

retein its Nourishment; it has also a publick, which is to discern Tangible Qualities, by the Sense of Feeling. The Action of the Liver is Blood making; of the Testicles, seed making; of the Dugs ro make Milk. But the use is, that help which the less principal parts afford the more principle in the performance of their Actions, which arises from, first, their Temperature in respect of first Qualities, as heat, cold, moisture, dryness. secondly, such things as follow the Temper, and they are second Qualities, as hardness, softness, thickness, thinness, density, rarity, &c. thirdly, necessary Adjuncts, as magnitude, number, nature, figure, conformation, connexion, situation, cavity, surface.

IV. The Body is divided into parts, first according to their Composition, which is into Similar, and Dissimilar.

V. A Similar part is that which is divided into parts like it self: so that all the particles are of the same substance with the whole: as every part of Skin is Skin, every part of Flesh is Flesh.

VI. These Similar parts are according to some Authors in number ten: But if these must be taken for Similar parts, which other Authors enumerate they are more: if with Riolanus we add Fat there are eleven Similar parts: if with Galen or Dr. Read we add a Tendon (who saith in his Anat. lib. i. cap. i. its substance is simple without any Composition) there will be twelve: If with the eternal Bartholine, we add a Muscle (who saith in his Anat. lib. i. cap. i.

Some add Muscles, and in another place of the same Chapter, he enumerates Muscles, with Veins, Arteries, as similar parts) they will be in number thirteen.

The names of the Similar parts are 1. A Bone. 2. A Gristle. 3. A Ligament. 4. A Membrane. 5. A Fibre. 6. A Nerve. 7. An Artery. 8. A Vein. 9. Flesh. 10. Skin. To which if you please you may add, 11. Fat. 12. A Tendon. 13. A Muscle. The first ten are comprehended in these two Verses:

Cartilago, Caro, Membrana, Arterias, Nervus, Vena, Ligamentum, Cutis, Os, Len- tissima Fibra.

VII. Of the Similar Parts, some are Similar absolutely: others are Similar only according to Sense.

VIII. The absolutely Similar or Simple parts are, 1. Skin. 2. Flesh. 3. Membranes. 4. Fibres. 5. Ligaments. 6. A Cartilage. 7. A Tendon. 8. Fat. The Similar according to appearance or Sense, are 1. The Veins. 2. The Arteries. 3. The Nerves. 4. The Muscles. 5. The Bones.

That these five last are not truly Similar, but only according to Sense or appearance, we thus prove: A Vein consists of a Coat, and of Fibres (as some will have it) and Valves: An Arterie consists of two different Tunicles: A Nerve is made up of the Dura and Pia Mater, with Marrow: A Muscle consists of Flesh, Fibres, Nerves and a Tendon: A Bone consists of a Membrane (called Perostion) A peculiar hard substance

stance, with sometimes Marrow, spongy Cavities, and a Bloody juyce.

IX. Again, of the Similar parts, some are said to be Spermatical, some Sanguine, and others mixt of both.

The Spermatical parts are the first eight, viz. a Bone, Cartilage, Ligament, Membrane, Fibre, Nerve, Artery, Vein, To which add in the ninth place, a Tendon: Flesh and Fat are made of Blood alone; Fat, being according to Riolan (*Anat. lib. 2. cap. 1.*) the thinnest substance of the Blood, Oily, Sweating out through the tender Coats of the Veins, and hardning between the Membranes: A Muscle and the Skin, are made of both.

X. A Dissimilar or Compound part, called also an Organical and Instrumental part, is that which is made up of more or less Similiars, and may be divided into divers unlike parts, as a Finger, Hand or Arm, a Toe, Foot, Legg, &c. A Hand cannot be cut into many Hands, but it may into Bones, Muscles, Veins, &c.

XI. Now in every Organical, Instrumental or Dissimilar part there are four things observable, for example sake; in the Eye there is, 1. That part by which the Action, viz. seeing is performed, to wit, the Crystalline humour. 2. That part without which it cannot be performed, as the Optick Nerve. 3. That by which it is assisted or better performed, viz. the Coats and Muscles of the Eyes. 4. That by which the Action is preserved, as the Eye-lids.

XII. There are three degrees of

an Organick part, 1. That which is made of Similiars only, as a Finger or Toe. 2. That which is made of Similiars and an Organick, as a Hand or Foot. 3. That which is made of two or more Organicks, as an Arm Legg or Thigh.

XIII. Secondly, the body is divided into parts according to form, which is into Venter and Limbs.

XIV. The Venters are threefold, First, That of the Head, containing the Brain and Animal parts: Secondly, that of the Thorax, containing the Heart and Vital parts; Thirdly, that of the Abdomen, containing the Liver and Natural parts.

XV. The Limbs are divided into the Joynts of the Hands and Feet: under which are comprehended also the Arms and Shoulders, Leggs and Thighs.

XVI. Thirdly, The Body is divided into parts according to their Ends, viz. their Functions or Actions: and these are, First, either Principal, or Administring: Secondly, either sustaining or sustained.

XVII. The Principal are such as perform some noble Operation common to the whole Body, as the Brain, Heart, Liver; for from the Brain arises the Nerves; from the Heart the Arteries; and from the Liver the Veins.

XVIII. The Administring or Subserving parts are either necessary or not necessary.

XIX. The necessary are those without which one cannot live, or not well live, as the Lungs, Stomach, Guts, Spleen, Gall, Kidneys, Bladder: the Lungs serve the Heart: The Stomach, Guts, Spleen, Gall
Kidneys

Kidnies and Bladder, serve the Liver : and all the Instruments of the Senses, serve the Brain.

XX. The non-necessary, are the Similar, as simple flesh, &c. Or Dissimilar, as a Finger, Arm, Toe, Legg, &c. for where flesh is wanting as in a Consumptive, or too much abounds as in Corpulency; or where a Finger, Hand, Toe, Legg, &c. are either wanting or supernumerary, the party so concerned may yet be in the possibility of living healthfully.

XXI. The parts sustaining are the Bones, for they uphold the frame of the whole Body: all the other parts are sustained or upheld.

From the two first Considera-

tions of the Division of the Body into parts, at Sect. IV. and XIII. above, we come to make these Our Anatomicks to consist of these XIII Chapters. I. Of Anatomy in general, and of a Part. II. Of Parts absolutely Similar. III. Of the Veins. IV. Of the Arteries. V. Of the Nerves. VI. Of the Muscles. VII. Of the Bones. VIII. Of the Abdomen. IX. Of the Thorax. X. Of the Head. XI. Of the Limbs or Joints. XII. Of the Blood, its Generation and Circulation. XIII. Of Anatomick Terms. Of all which (through the Assistance of God) we shall treat in Order.

CHAP. II. Of Parts absolutely Similar.

I OF the Skin.

§ 1. *Cutis*, Græce *Αἰσθητική*, *quasi* *ἰσθητική* Vinculum, a band; The Skin is a membranous Covering of the Body, Similar, Spermatick having some Blood mixt with it, reddish, white, loose, and the Instrument of feeling. § 2. It is called Membranous, because the substance is the same with a Membrane, and it is stretched abroad like it; yet it differs from a Membrane in Temperament, Conformation, and Office. § 3. It hath Cutaneous Veins and Arteries, as also Nerves; from the last of which, it receives its quickness of Sense, there being many small Branches spread abroad in it, as Nerves of the third and fourth pair which pass to the Face, and Nerves of the

sixth pair which pass to the Arms. § 4. From the Capillary Veins and Arteries, it receives Blood for nourishment, and Vital Spirit for Quickning. § 5. Its temperature is cold and dry; or rather exquisitely Temperate, yet so that it may be the Judge of Feeling. § 6. The Skin on the Top of the Head is thickest; that on the sides thin; that on the Face and Palms of the Hands thinner; that on the Lips and Cods thinnest of all: that on the Tops of the fingers is mean, that so the Sense of touching may be the more perfect. § 7. Its figure is the same with the Body which it cloatheth: its Texture is slight and very full of small holes or Pores, for the insensible transpiration of Fumes, Vapors, and

and Sweat. § 8. *It takes its Colour from the predominant humour, unless it be such from the Birth, as in Ethiopia.* § 9. *It has a double substance: the one is External, called $\alpha\mu\epsilon\sigma\kappa\upsilon\sigma$, Cuticula, the Scarf Skin, because it is placed upon the Skin as a cover or defence, every where perforated with Pores, without Blood and without Feeling: Its connexion is to the true Skin, from whence it has its Figure and colour; but in Black-Moors the Cuticula being pulled off, the Skin it self is White.* § 10. *It has no Action, only Use, which is to shut the Pores of the Skin, that the ichorus substance may not Issue from the Veins and Arteries; to defend the Skin from immoderate heat or cold; and to make it Smooth, Beautiful, Polished and Even. It is generated of a viscons and oleaginous vapour of the Blood.* § 11. *The other is the true Skin, of which we have first spoken, which is six times thicker than the Scarf Skin; its Pores will appear in Winter time, if it be made bare, and exposed to the cold: for where they are, the Cuticula will appear like a Goose Skin.* § 12. *The Skin receives two Cutaneous Veins, through the Head and Neck, from the Jugulars: two through the Arms, Breast, and Back, from the Axillaries: two through the Lower Belly, Loyns, and Leggs, from the Groins, which are conspicuous in Women after hard Labour, and in such as have the Varices in many Branches. It has few Arteries, and those very small, in the*

Temples and Forehead, Fingers, Cods, and Yard.

II. Of the Flesh.

§ 1. $\Sigma\alpha\gamma\gamma$, Caro, *Flesh, is a similar, soft, thick substance, well compacted, made of Blood alone, if it be red; but of Blood and Seed, if it be white.* § 2. *It is four-fold, viz. Musculous, Viscerous, Membranous, and Glandulous: Of which the two first are very red; but the two latter white.* § 3. *First, Musculous flesh (called by Galen Fibrous flesh) is soft and red, and that which is properly termed Flesh.* § 4. *Secondly, Viscerous Flesh called $\pi\alpha\gamma\epsilon\gamma\chi\upsilon\mu\alpha$ or Parenchymick, is the flesh of the Bowels, which is the proper substance of the Lungs, Heart, Liver, Spleen, Kidnies; it is red, hard, fitted to prop up the Vessels, and to assist them in their particular and various Operations.* § 5. *Thirdly, Membranous flesh, is the fleshy substance of every Membranous part, as in the Gullet, Stomach, Guts, Womb, Bladder.* § 6. *Fourthly, Glandulous Flesh, or the Flesh of Kernels, it is white, thick, and spongy, formed of Seed (and therefore cannot be so properly called Flesh) of which some Anatomists make many diversities; but the true searcher may find that the Glandules differ not so much in substance, as in their use and humour.* § 7. *Their chief uses are, first, to support the Divisions of the Vessels: secondly, to drink up superfluous (chiefly wheyish) Humors, because they are of a hollow spongy substance, and are therefore Vulgarly termed Emunctories, or cleansers of the*

No-

Noble parts: these in the Neck being accounted cleansers of the Head, those in the *Armpits* of the Heart, and those in the Groins of the Liver: Thirdly, to moisten the parts for their more easy motion, or to prohibit dryness, such are those which are situated by the Tongue, Larynx, Eye-Corners, &c.

III. Of the Membranes.

§ 1. A Membrane, *Tunic* Skin or Coat (called by the Ancients *ῥυτίδιον*, *ῥυτίδιον*, *ῥυτίδιον*, *Operimentum*, and *Tegumentum*, a Coat or Covering) is a similar, spermatick part, broad, soft, dilatible, white, containing and investing the parts, and carrying sense to them. § 2. If being a hollow Body, it receives something, as the Stomach, Bladder, Gali, Eye, it is called *Tunica*, a Coat: but if it embraces and covers a solid Body, it is called *Membrana* a Covering: and those which cover the Brain are called *Meninges*. § 3. It is indued with Sense from its self, for all Membranes are sensible: yea the Nerves themselves owe their Sense to the Membranous substance of them. § 4. Membranes therefore only are the true Organs of feeling, they serving the Animal Spirits to this purpose § 5. Its use is, first to invest the parts of the Body: secondly, to defend it from injuries by reason of its hardness and compactness: thirdly, to give them the Sense of feeling: fourthly, to strengthen them: fifthly, to joyn parts to parts, and to keep them so united; so the Mesentery knits the Guts to the Back: sixthly, to separate also the parts: seventhly,

to close the Mouths of the Vessels, lest the nutritious Blood or humors should be carried too suddenly into the part or out of it into the Vein it self; or least they should flow out, or back. § 6. The Differences are, for that some Membranes are thin, some thick. § 7. The thin Membranes also differ; for the Periostrion of the Ribs is thinner than the Pleura: the Periostrion of the Head is thinner than the Pericranium: the Pia mater is thinner than the Dura mater. § 8. The proper Membranes of the Muscles (which some will have to Spring from the Pericranium or Periostrion, others from the Nervous Fibres of the Muscles) is thin, and is knit unto the Muscles, by most thin Filaments: Its use is to cloath the Muscles, and to separate them one from another: and to impart to them Sense and Feeling. § 9. The thick Membrane called *ὑπερμυοειδής*, *Panniculus Carnosus*, or *Membrana Carnosa*, is called by some a membranous Muscle, by others a Neryy or fatty Coat; it is called Flethy, because in some places as about the Cods, Loyns, Neck, Ears, Forehead, it retains its fleshy Substance: but in the Abdomen of a Man ripe in years, it has no fleshy appearance at all. § 10. Its temperature is hot and moist, having its Original from Blood: It is situated under the Fat, and stretched out over the whole Body universally, and is the fourth Covering of the Body, (but in Beasts it is next to the Skin:) it has no Figure, but that of the Body which it covers:

covers: *its color* is various in divers places, in the Neck, Forehead and Cods it is redder than else where: *In some places it is joyned to the Fat inseperable*, so that it with the Fat seems to make but one Membrane; in other places it may be separated: *It communicates with the principal parts by the extremities of the Veins, Arteries and Nerves.*

§ 11. *Riolan saith, it is one single Membrane, but Vesslingus saith, that its constitution is not always single, for saith he, in fat Bodies you may often find it double, sometimes manifold: and Bartholine saith, in a mans Body, if exact separation be made, it will appear to consist of four distinct Membranes.*

§ 12. *It is very sensible so that the rigour and trembling of the Body depends thereupon: Its use is to give foundation to the collecting and generating the fat; and to keep the fat in its due place, as also to divide one Muscle from another, and all of of them from the other flesh; to cloth the Body, cherish the Internal Heat, and to defend it from External Injuries: It sticks close to the Fat, to the Muscles, and to the Ligaments of the Bones, and is firmly joyned to the Back in fashion of a Membrane, from whence it is said to arise; it is so closely joyned to the Musculus Latissimus, that in the Neck and Forehead it can scarcely be separated from it, whereby it is thought to constitute the same: to the skin it sticks by very many Veins, some few Arteries, branches of Nerves, and an in-*

numerable number of Membranous Fibres.

IV. Of a Fibre.

§ 1. *Is, Fibra, A Fibre is a similar spermatick part, dispersed through the Skin, Flesh and Membranes, to make them the more firm, and being naturally distended, to contract again in the same manner.* § 2. *Riolan saith, it is like a thread strecked over a Membrane, or interwoven with it to strengthen it.* § 3. *By reason of the various scituation thereof, it is said to be either Right, Oblique, Transverse or Round, whereby it may not only help the Membrane, but strengthen it, as also the skin and flesh or Muscles; and when dilated, reduce them to their natural state.* § 4. *Each sort of Fibre is said to perform a several Action; as, the Right to attract or draw to; the Oblique to expel or thrust forth; the Transverse to retain or hold; and the Round to constrain or bind.* § 5. *But these Actions of the Fibres, are not made so much by their own singular Virtue, as by the virtue of the Member which they serve, or belong unto, from which they have their Sense and Nourishment, for of themselves they are senseless.*

V. Of a Ligament.

§ 1. *Συνδισμῶν, Ligamentum vel Vinculum, A Ligament, Tye, or Band, is a similar, spermatick, dry part, adhering firmly to the Bones, tying the parts of the Body mutually together.* § 2. *Its Substance is solid, white, bloodless, softer than a Gristle, and harder than Nerves and Membranes; being of a middle substance between them.*

§ 3. *It*

§ 3. *It is without Cavity, Sense or motion*: it was to be without sense, least it should be always pained in its motion; but some will have membranous Ligaments to feel, if so, it is by means of their Membranes, not of their own proper substance, which, as Galen saies, is divisible into Fibres, visible to the sight. § 4. *This Substance is in some places softer and more membranous than in others*, as in all Ligaments well near which go about the Joynts: it is softer about the Joynt of the Shoulders, than about that of the Hip; and yet softer where it goes about the interjoyntings of the Fingers: but in other places the substance is harder and as it were in part Gristly, and are called gristly Ligaments, these lay hid among the Bones, as that which goes from the head of the Thigh into the Hip-joynt. § 5. *Its efficient is the Ligament making power: its matter is a clammy roaping part of the Seed*: its Use is like a Cord to connect or bind the parts of the Body one to another, chiefly the Bones, and to keep them so together, that they may not be luxated or disjoynted. § 6. *Its Original (though indeed it be made of Seed)* is said to arise primarily from the Bone, sometimes from a Gristle, or Gristly Bone, or Membrane; and it is said to be inserted into a Bone, Gristle, Muscle or some part. Or thus, Ligaments grow among or in the Bones. § 7. *As to situation*, some are within or among the Bones, as the Gristly Ligaments, which are thick and round: some are externally wound about the

Bones, which are thin and membranous. § 8. *As to Figure*, some are broad which are called Membranous; others round and Nervous: but they are called Membranous and Nervous, only in respect to their external form or resemblance, not to their internal essence; for they are all void of sense, which they would not be, were they composed of the true substance of a Nerve or Membrane. § 9. *Lastly, all the Ligaments are Solid*, none hollow, except the slender Ligaments of the Womb.

VI. Of a Cartilage or Gristle.

§ 1. *Ἀσθὺν, Cartilago, a Gristle, is a similar, spermatick part, dryer and harder than a Ligament, but moister and softer than a Bone, rendring the Articulation the more pliable, and defending several parts, from external injuries.* § 2. *Some are softer, especially about the Joynts*; others harder, and not much differing from the nature of a Bone; and some, as Cardan shews, are in process of time turned into Bones, especially in aged people. § 3. *It is without Marrow, Cavities or Sense*, being endowed neither with Nerves or Membranes. § 4. *Its Efficient is the Vis ζωδὲ γεννητικὴν, Cartilaginifica, or Gristle making power or faculty.* Its matter is the same with that of the Bones, being a moist earthy part of the seed, partly clammy and glewy, and partly fat; but more viscous than fatty: Its use is to facilitate motion, that the Bones rubbing one against another should not wear and fret; to defend some parts from external Injuries;

it self being scarce subject to any: to shape parts prominent or hollow, as in the Ears, Larynx, or Weland; to fill up hollowness in the Joynts, as in the Knees: to serve for a cover, as in the Epiglottis; to sustain or underprop somewhat, as the Gristles of the Eye-lids to bear the hairs; and lastly to make such a connection or joyning of the Bones as is called *συνχονδρῶσις*, *Synchondrosin*, or by interposition. § 5. Its situation, magnitude and figure, are various, according to the Bones they are joynd with: Their substance is sometimes harder, as those which in time become Boney: sometimes softer resembling a Ligament, and are therefore called *χονδροειδῆς* *Chondroideus*, gristly Ligaments; yet though it be hard, it is flexible and tough, because encompassed with a viscous slimy matter. § 6. As to their connexion, some constitute parts in themselves, as that of the Nose, *Xyphoidis*, the *Coccyx*: others grow to the bones which knit them together, without any other medium, as in the Share or Breast-bones, or by common Ligaments coming between, as in that joyning called *διαρθρῶσις*, *Diarthrosin*, or loose Articulation.

VII. Of a Tendon.

§ 1. *Ἀρτηροειδὲς*, *Tendo*, *Chorda*, a Tendon, is a similar spermatick solid part, cold and dry, having a peculiar substance, continued from the beginning to the end of a Muscle, and the chiefest part thereof upon which the Action of the Muscle depends, and no where to be found out of a

Muscle. § 2. It has a Nervous like substance, (yet extremely differing from a Nerve) white, with a kind of Silver like brightness or color; so that *Fallopis* affirmed nothing was more beautiful in the Body of Man, than a Tendon, and the Crystalline humour of the Eye: It is thick, hard, smooth, and extended according to the length of the Muscle; being ten times bigger than a Nerve. § 3. It beginneth at the Head of the Muscle, passeth through the Belly of it, and endeth in the Tail: but the beginning of its dispensation (saith *Bartholine*) is a Bone, for it springs from a Bone, and is inserted or implanted into a Bone. § 4. Its figure is either solid and round, as in the *Musculus Biceps*; or plain and Membranous, as in the Muscles of the Abdomen, being also either short or long, and of a uniform substance in all its parts; so that if it is Nervous at the beginning, so it is at the end; but sometimes it is Nervous at the end, when the Head of it is fleshy; and if its beginning is like small strings, they are united to form the Tendon afterwards. § 5. *Riolan* saith, That it is thought to consist of a Nerve & a Ligament mixed together: but other very learned men deny it; first, because a Nerve being somewhat soft, will not admit commixion with a Ligament being hard: secondly, because the Nerve is not carried to the Tendon; but doth end in inconspicuous Threads: thirdly, because Ligaments are insensible; but Tendons are of exquisite Sense, as appears by the great

pain, which ensueth, if they be pricked : *fourthly*, because the Ligaments of Bones have the Composition of Membranes, for they are made of strait and transverse Fibres, as a Web, whereas Tendons have only straight Fibres. § 6. *It is the principal part of a Muscle*, and not its Fibrous Flesh ; *first*, because it only has strength to lift up the Bones : *secondly*, because it only is fit to contract it self : *thirdly*, because its substance is singular. § 7. *It has its motive faculty from the Nerve by Influence*, as the Loadstone draws Iron, and the Torpedo or Cramp-fish, benumbs the Hands of the Fisher-man by the fishing-Pole. § 8. *The hard and stiff Tendons have much Fat about them*, to soften them, that they may be the more pleasantly moved ; and therefore those Fibres dispersed among the Flesh, are nothing else but the Tendon divided : and the Tendon nothing else but Fibres united, and therefore, § 9. *A Tendon is either solid, compact, and united : Or else disgregated, severed and divided into Fibres.* § 10. *United is*, where the whole Tendinous part, appears white, and hard, either in the beginning, end, or middle, or in all those parts. § 11. *Severed or Divided*, when produced into enumerable, small Fibres scarce discernable to the sight ; being compassed about with Flesh. But in boyled Hogs-flesh, and flesh of a Turkey Cock, these Tendinous Fibres may be discerned ; In the Muscles of the Thighs of a Turkey Cock, the Tendinous parts ap-

pear whole and united from the beginning to the end : In a Man the Tendon sometimes descends presently after its Original mixed with Flesh : sometimes it appears united in the end, and severed in the beginning, as in the Muscle *Deltoides*.

VIII. Of the Fat.

§ 1. *Πικελή, Pinguedo, Fat*, is a similar, soft, oily, white, insensible part : made to preserve the natural heat, to help chylication, to facilitate motion, to moisten other parts, and to nourish the Body in Famine. § 2. *Its substance is twofold*, viz. *πικελή, axungia, Grease* and *σέας, Sævum, Suet*, which although it is somewhat solid, yet is soft and oily, as may be perceived by handling : Grease or *Axungia* is easily melted, but not so easily congealed : *Sævum* or Suet is not so easily melted, but more easily hardened. § 3. *The Original is from the thinner part of the Blood sweating through the Veins like Dew, and congealing about the Flesh* : this is the essential matter of Fat : its Efficient Cause is a moist and temperate heat (which is also the quality thereof ;) the cause of its congealing, is the coldness of the Membranes, from whence it gets its white color : but this coldness is not simple, but respective to other parts : melted Lead or Wax will congeal in hot places, if the heat be less than that which will melt them : hence Galen determines Fat to proceed from coldness : so that the fat, thin and light part of the Blood, in colder Constitutions is reserved, whilst in hotter Bodies it turns

to Nutriment, so that hot and dry Bodies are hardly ever Fat.

§ 4. *Its Situation is immediately under the Skin, universally over the whole Body, the Forehead, Eyelids, Cods, and Yard (where there is no Fat) excepted, whence it is, that the fatty Membrane is as large as the Skin, and sticks firmly to it, neither can it be divided from it without scraping; and so also it sticks to the fleshy Membrane.*

§ 5. *It cannot communicate with the principal parts, because it is not truly nourished; nor yet lives, unless by opposition, as Stones do, nor is it indeed sensible, therefore it wants both Veins, Arteries, and Nerves, yet all three of them pass through it, that they may come at the Skin.*

§ 6. *The Fat of the Belly has three Veins, the External Mammary, descending from above: the Vena Epigastrica, arising from beneath, or out of the Crural Vein, through the Groins: and that coming out of the Loyns, having very many Veins accompanied with Arteries: Through these, and the Vessels of the Skin, Cupping-Glasses, and Scarifications, draw humours out of the inward parts.*

§ 7. *It has a great number of Kernels, which receive excrements out of the Body into themselves; and they are more numerous in sickly persons; and such as abound*

with excrementitious moisture

§ 8. *Its uses are, To cherish the natural heat, and keep warm as a Garment, for it defends the Body from the Air, to cool in Summer, by hindring the penetrating of the heat: to help the Concoction of the Stomach: to moisten hot and dry parts, such as the Heart: to facilitate motion in the principal parts, as in the Gristles, and joyntings of the greater Bones, and about certain Ligaments, as also in the Socket of the Eye, left by its continual motion it should become as it were dry and withred: To serve as a Pillow or Bulwark against Blows, Bruises and Contusions, and therefore the Palms of the Hands, Buttocks, and Soles of Feet, have plenty of Fat: To nourish the Body in time of long Fasting: to fill up the empty places in the Muscles, and to underprop the Vessels, that they may pass safely: and lastly to fill up all the Vacuities of the other parts, Vessels and Skin; that the Body may be rendred smooth, white, soft, fair and beautiful.*

Heitherto of parts absolutely similar; those which are so only in appearance, or to sence, are in number five, viz. Veins, Arteries, Nerves, Muscles, Bones; of all which we shall now treat in Order.

P pp 2 CHAP.

CHAP.III. Of VEINS.

I. OF a Vein in general.

§ 1. *Φλὲξ*, *Vena*, a Vein, is a similar, spermarick, membranous, round, long, hollow part, every where joyned by *Anastomoses* to the Arteries; allotted to receive and contain the Blood from them, to be farther concocted, and to be carried to the Heart and Liver, and to distribute it over the whole Body.

§ 2. Or, according to the most learned Bartholine, A Vein is a common Organ, round, long, hollow, like a Conduit or Channel pipe, fitted to carry or bring back Blood and natural spirits. § 3. The efficient cause of a Vein is the Vein making power or faculty: the matter is a clammy and earthy part of the Seed: The Original of their dispensation, or place from whence they rise is the Liver, where Blood is made; and that the first Sanguification is made there and not in the Heart, is apparent, because there are no passages to convey the *Chylus* to the Heart, nor any receptacles for the Excrements of the first Concoction placed by the Heart; all which requisites are found in the Liver. Moreover Blood is carried from the Liver to the Heart, but not from the Heart to the Liver: for it cannot go out of the Heart into the Liver, because of the *Valves*, though mediately when it runs back out of the Arteries, it may be carried thither. Also the *Vena Cava*

and *Porta* enter not into the Heart but the Liver; and in a Child in the Womb, the Navel Vein with Blood (which nourishes the Child) goes not into the Heart but into the Liver; nor is sanguification ever hurt, but when the Liver is hurt.

§ 4. The Veins have only one Tumour, with many Valves within, especially in the External joynts; they are nourished with Blood, not with that contained within themselves, but with that from the little Arteries; for their connexion is such with the Arteries, that every Vein is for the most part attended with an Artery, over which it lies, and which it touches. Galen saith, A Vein is seldom found without Arteries: but no Artery is ever found without a Vein. § 5. Their form is that of a Conduit Pipe; their Magnitude according to their place: in the Liver, and their Original, they are great, because they are hot, soft, and in perpetual Motion, and because all the Blood in the Body passes this way, out of the right into the left Ventricle of the Heart: In the Heart they are great, by reason of its heat, and because it is to furnish the whole Body with Arterial Blood, received in, and sent out by continual pulsations. The Emulgent Veins are great, because of the plenty of Blood, and Serosities, brought back from

from the Kidnies to the *Vena Cava*. But where the substance of the part is lasting, and the heart small, the Veins are lesser, as in the Brain, Bones, &c. And in all parts towards their Ends they are very small, and called *Capillary Veins*, being divided minutely, sprinkled into, and for the most part confounded with the flesh; by this way the Arterial Blood is mediately passed through the porous flesh to the Veins; and by the same way also, Blood made of *Chyle* in the Liver, is infused into the little branches of the *Vena Cava*. § 6. *There is also a mutual Anastomosis of Veins and Arteries, that they may conspire together, and the Veins receive out of the Arteries spirit and Blood*; and this is apparent; because, if the Veins be quite emptied, the Arteries are empty also: Moreover, by a Vein opened in the Arm or Hand, all the the Blood in the Body may be drawn out: also it is necessary in respect of the Circular motion of the Blood: and in many places it may be demonstrated to the Eye-sight, where the Conjunctions of the Veins with the Arteries are Visible; as in the Brain, in the *Plexus Chæroides*; in the Lungs, of the *Vena Arteriosa*, & *Arteria Venosa*, with the branches of the *Aspera Arteria* or Wind-Pipe; in the Throat, of the *Thoracic branches* descending, with the *Intercostal Veins*: Also the *Hypogastrick Veins and Arteries* with the *Mammary Vessels*, are joynd Mouth to Mouth, under the *Musculi recti* in the *Abdomen*. But the *Anastomoses* or mutual

Conjunctions of the Mouths of the *Cava* and *Porta* in the Liver; and of the Veins and Arteries in the Spleen, are in a special manner manifest; so in the Veins of the Womb, the Seminary Vessels, Navel strings, and extremities of Hands and Feet. § 7. *The Veins are indowed with feeling both from the Nerves that are near them; and from their own Membrane, which is one only, where they are inserted into some Bowel: otherwise they are besides invested with a common Membrane, or some external thick one, borrowed from the neighbouring parts, when either they are suspended and carried along way without the Bowels and Muscles: or when they rest upon hard Bodies. This happens in the Abdomen to the Veins and Arteries from the Peritoneum; and in the Chest from the Pleura.* § 8. *Their use is to receive the Blood not sufficiently elaborated from the Arteries, and to return it to the Liver and Heart, there to be more perfectly concocted. For neither is the Venal Blood, nor do the Veins carry any thing useful for nutrition but they bring back all the Blood to the Heart, only by Circulation either mediately by the Liver, as the Mesaraick Veins; or immediately, as the Cava, and that either from the whole Body, from the smallest branches to the greatest, by the upper and lower branch; Or from the Liver, whether it be there generated, or is derived from the Mesaraicks and Arteries.* § 9. *But there is also a Secondary use of these Vessels,*

viz. to prepare the said Blood, as do the *Rami Lactei*; Or to finish and perfect it, as a small part of the *Vena Cava* between the Heart and the Liver: and lastly to be the receptacles of its preservation; for being extravasated, or extravasated, it curdles and putrefies. § 10. Hence it appears, that the Veins carry and recarry the Blood to the Liver; and to this end the Valves of the Veins do conspire, which are so contrived, that they stand all wide open towards the Heart, and afford an easy passage from the smallest Veins to the greatest; and from thence to the Heart, but from the Heart and great Veins, being shut they suffer nothing to goe back; no not Water cast in by force, or a Probe, unless being hurt they gape. § 11. The Liver sends only to the Heart, the Heart only to the Lungs, and all the Arteries: seeing therefore the Blood is thus sent into all parts, and cannot now be instantly repaired by Diet, nor return back to the Heart by the Mitre fashioned Valves of the Aorta, nor abide still in the Arteries, which are continually moving forward the same: nor lastly, that there can be so much spent by the parts, to be nourished: it necessarily follows, that what remains over and above, is brought back again to the Heart, and enters the Veins by Circulation; as the renowned Harvey, and after him, Walaeus have proved and published to the World, and as we shall also hereafter demonstrate. § 12. The substance of the Veins is Membranous that they

may the more easily stretch and shrink again: they have only one Tunicle which is proper to them, (as we have said at § 4 and 7.) which is thin, and rare, (the Arteries have two:) it is so thin, that through it the Blood may be received after the parts are nourished, and so be recarried to the Heart to be there again perfected. § 13. The Valves of the Veins, are little Foldings, or Gates; which were first hinted at by Paulus Servita the Venetian, to Aquapendens: Aquapendens says, himself was the finder of them Anno 1594. afterwards Archangelus, Piccolomineus, Bauhinus and others wrot of them. They are made of most thin little Membranes, in the inner Cavities of the Veins, and certain particles as it were of the Coats of the Veins: they are situated in the Cavities of the Veins chiefly of the Limbs, viz. of the Arms and Leggs, after the Glandules of the Arm-holes and Groins, beginning presently after the Rises of the Branches, but not in the Rises themselves: nor is there any of them in the external (small Veins, because they need them not: nor in the Jugulars (except two in the inner orrifice, looking from above downwards) because the Blood doth hardly ascend upwards: nor in the Vena Cava, because the Valves in the Divarications do sufficiently hinder the regress of the Blood: They are also found in the Emulgents, and in the branches of the Mesentery, looking towards the Vena Cava and Porta: as also in the Milky Veins. They all of them look the

same way, one after another, viz. towards the Heart: and are placed at convenient distances, as two, three, four or five Fingers between each other, according to the length of the Vessel. As to their Magnitude they are greater where the plenty and recourse of the Blood is most vehement, being in form like to the Nail on a mans Finger, or the horned Moon, as the Sigma shaped Valves of the Heart; and in their substance exceeding thin, but withal very compact, lest they should break by a strong intercourse of the Blood. § 14. The uses of the Valves are, 1. To strengthen the Veins, whereas the Arteries are otherwise made strong by their double Coats. 2. To stop the too violent motion of the Blood, lest it should move out of the great Veins into the little ones, and so tear them. 3. To hinder the Blood from regurgitating, or going backwards. Hence the Cause of a Varix is apparent, because thick, heavy blood long retained against the Valves, makes a dilatation; for without the Valves the Veins would swell uniformly and all of an equal bigness, and not in the manner of Varices.

II. The Difference or Division of the Veins.

§ 1. The chief Veins of the whole Body are of three kinds, first, the Vena Cava: secondly, the Vena Porta: thirdly, Venæ Lactææ: from which several other eminent Veins arise having particular denominations. § 2. The two first take their beginnings from

the Liver: the last from the Guts; for they arise from all the Guts, yea even the Duodenum, but chiefly from the smaller Guts: not so many from the greater; nor do any of them take beginning from the Stomach or Spleen. § 3. There are other Veins at the Vena Pulmonalis, &c. of which we shall speak in their proper places.

III. Of the Vena Cava or Magna, the great hollow Vein.

§ 1. It is called also Vena Maxima, the greatest Vein, because of its largeness, being the greatest in the whole Body, and the Original of all other Veins which do not proceed from the Vena Porta. § 2. It takes its beginning from the Liver (therefore termed by Hippocrates the Liver Vein) where having spread many Veins through the upper parts thereof, they are about the Top collected into one Trunk, which is presently divided into two parts, viz. the upper or Ascendent Trunk; and the lower or descendent Trunk.

IV. Of the Ascendent Trunk of the Vena Cava which is the greater.

§ 1. It perforates the Diaphragma or Midrif, and is spread through the Breast, Neck, Head and Arms.

§ 2. It is carried undivided, as far as the Jugulum, and has four Branches. § 3. I. Phrenica, Vena Diaphragmatica, the Midrif

Vein, on each side one; which send their branches to the Pericardium and Diaphragma or Mediastinum: Quittor in such as have an Empyema, is carried by this

Vein to the Kidnies and Bladder, Severinus proves, and after him Bartholine. § 4. II. *Vena Coronaria*. It proceeds from *Vena Cava* (after it has made its passage through the *Pericardium*, a little towards the left hand, and insinuated or inwardly united it self into the right Ventricle of the Heart, by a large fleshy Orifice, and is joyned on all sides to the left Auricle :) It is sometimes double, encompassing the Basis of the Heart ; at whose Rise, a little *Valve* is placed to hinder the Blood returning to the Trunk : and with a continued passage, it is joyned to the Arterie : that it may there-from receive the Blood, which is to return to the *Cava*. § 5. III. *Azygos*, ἀζυγός, *sine pari*, the solitary Vein, or Vein without a fellow. It comes from the right side of the same ascending Trunk (after it has past through the upper part of the *Pericardium*) being but one only, and one side (yet Bartholine saith, He had often seen two, and sometimes none at all;) It sends chief Intercoastal branches to the eight lower Ribs, arising about the fifth *Vertebra* of the Breast, from the hinder part of the *Vena Cava*, then about the fleshy appendices of the *Diaphragma*; it enters the Cavity of the *Abdomen*, where on the left side it is inserted into the *Emulgent Vein*; on the right side into the Trunk of the *Cava*. Sometimes it descends right forward above the middle of the Back-bone; and sends out Intercoastal branches on each side; these Intercoastals are sometimes here and there

joyned (by *Anastomosis*) with the branches of the *Thoracica Inferior* which arise from the *Basilica*; and with the Intercoastal Arteries. § 6. Near the eighth rib, it is divided into two branches: the greater ascends under the *Diaphragma* to the left side, and it is inserted sometimes into the *Cava*, above or beneath the *Emulgent*: sometimes into the *Emulgent* it self; by this way (according to the vulgar Doctrine) Pleuretick persons are many times Critically purged by Urine, voiding abundance of matter; but Bartholine saith, It may be more truly said to be purged out by the *Emulgent Arteries*, by mediation of the Heart. The lesser branch on the right hand goes to the *Cava*, and is joyned thereto, seldom to the *Emulgent*, sometimes above the *Emulgent*: sometimes it is implanted into the last, sometimes into the first of the *Lumbal Vessels*. § 7. IV. *Subclavij*, or branches of the *Cava* by the Channel-Bones: for the *Cava* ascending to the *Clavicula*, underproped with the *Thymus*, is divided into two only branches, one on each side; each of which are divided into two others, viz. The *Subclavij*, and *Axillaris*.

V. Of the Rami *Subclavij*.

§ 1. From the *Ramus subclavius* come forth two several branches, a superior and an inferior. § 2. I. From the superior proceeds first, the *Muscula superior*: spread out near the *Jugularis Externa*, into the Skin and Muscles of the hinder part of the Neck. § 3. Secondly, the *Jugular Vein*, by the sides of the Neck, and they are

either *External*, or *Internal*; the first on both sides sometimes single, sometimes double.) § 4. The *External Jugular* creeps up to the Neck, Jaws, Head and Face: under the root of the Ear it is divided into *Internal* and *External* branches: the *Internal* goes to the Muscles of the Mouth, Fauces, Hyoides, &c. from this Branch spring the Veins which are opened under the Tongue. The *External* is proped with *Kernels*, and is divided into two parts: the one is carried to the fore parts of the Face, Cheeks, and Nose, and in the middle of the Forehead being joyned with a branch of the other side, it makes the Vein of the Forehead: The other is carried through the Sides, the Temples, and the Occiput. § 5. The *Internal Jugular* (in men it is the greater, because of the abundance of Brains: but in Beasts it is the lesser;) it is called *Apoplethica*, and ascends to the side of *Trachea* to which it sends Branches: and going to the Basis of the Skull in its hinder part, it is divided into two Branches: the greater of which is carried backward with the lesser branch of *Arteria Carotidis*, through the hole of the *Os Occipitis* (made for the sixth pair of Nerves) and enters into the Cavity of the *Dura mater* or thick *Meninx* of the Brain: the lesser enters in at the hole or *Sinus* of the third and fourth pair, and is carried also to the *Dura mater*, as aforesaid. § 6. II. From the inferior branch proceeds five Veins, the *Mammaria*, *Intercostalis superior*, *Me-*

diastina, *Cervicalis*, *Muscula inferior*. § 7. First, The *Mammaria* (on each side one) which carry Veins to the Breast or Dugs: this by way of *Anastomosis* is sometimes joyned to the *Epigastica*, under the right Muscles of the Abdomen, from whence there is great consent between the Womb and the Dugs. § 8. Secondly, *Intercostalis superior*, (on each side one) it is small, and comes out about the root of the *Bifurcation*, then passing down by the roots of two Ribs, it bestows branches upon the four upper Ribs, and their *Intercostal* Muscles. § 9. Thirdly, *Mediastina*, which goes to the *Mediastinum* and *Thymus*, together with the left Nerve of the *Diaphragma*, according to its length. § 10. Fourthly, *Cervicalis* or *Vertebralis*: This passing through the holes of the *Transverse processes* of the *Vertebrae* of the Neck is bestowed upon the Muscles of the Neck, which are next to the *Vertebrae*. § 11. Fifthly, *Muscula inferior*, which goes to the lower Muscles of the Neck, and upper of the Breast, and this also arises sometimes from the *External Jugular*.

VI. Of the *Vena Axillaris*, Or *Arm Vein*.

§ 1. *Ramus subclavius*, ascending under the Channel Bone, when it is come to the Arm-pit, is called *Axillaris*, and is divided into two Veins, viz. the *Vena Cephalica*, or upper Branch; and the *Vena Basilica*, or lower Branch, to which is added the *Mediana*. § 2. I. The *Cephalica*, or Head Vein: it is carried in the surface of the Body, between the

Tab. I.

The Vena Cava Explicated.

- A. Trunk of Vena Cava below the Heart.
 B. Trunk above the Heart.
 C. Hole by which it runs into the Heart.
 D. Subclavian branches.
 ee. Mammary Veins.
 f. Vena Mediastina.
 gg. Venæ Cervicales.
 hh. Venæ Vertebrales.
 iii. Jugulares externæ.
 Llll. Vena Azygos, or sine pari.
 mm. Intercostales superior.
 nn. Rami phrenici.
 oooo. Branches of the Cava through the Liver.
 p. Scapularis interna.
 q. Scapularis externa.
 r. Thoracica superior.
 s. Thoracica inferior.
 T. Cephalica.
 V. Its external Branch.
 X. Its internal constituting in part the Mediana.
 ZZ. Vena Basilica.
 aa. Its first Bough.
 ßß. External branch of the second Bough.
 δδ. Internal branch of the second Bough.
 θθ. Third Bough constituting the Mediana.
 ζζ. Salvatella.
 Veins in the lower parts.
 AA. Emulgent Veins.
 BBBB. Spermatick Veins.
 ccc. Veins of the Kidney Glandules
 dddd. Lumbal Veins.
 EE. Rami Iliaci.
 ff. Muscula superior.
 gg. The Sacra.
 HH. Ramus Iliacus externus.
 II. Ramus Iliacus internus.
 kk. Muscula Media.
 LL. Venæ Epigastrica.
 mmm. Venæ Hypogastrica.

- nn. Muscula Inferior.
 oo. Vena pudenda.
 PP. Crural Branch.
 Qqqq. Vena Saphæna.
 rr. Ischias Minor.
 sss. Muscula.
 ttt. Poplitea.
 uu. Suralis.
 xx. Ischias Major.

Fig. II.

The Vena Pulmonalis explicated.

- A. Its Orifice arising out of the left Ventricle of the Heart.
 BB. Its branches distributed to the right side of the Lungs.
 CC. Its branches distributed to the left.

Fig. III.

The Vena Porta Explicated.

- AAA. Trunk of the Vena Porta.
 Υ. Trunk descending from the Liver.
 B. Its splenetick branch.
 C. Right mesenterical branch.
 D. Left Mesenterical branch.
 aa. Umbilical or Navel Vein.
 b. Vein of the Gall.
 c. Vein of the Pancreas.
 dd. Gastrica dextra.
 eee. Gastrica sinistra.
 h. Vas Breve, so called.
 ii. Gastroepiploica sinistra.
 kkk. Gastroepiploica dextra, going to the Caul and Stomach.
 ll. Hemorrhoidal Vein internal from the right Mesenterick branch.
 m. Vein of the Duodenum.
 nnnn. Branchings of the Vena Porta into the Liver.
 ooo. Branchings of the left Mesenterial through the Mesentery.
 p. Vena Epiploica sinistra.
 q. Vena Epiploica superior.

Tab. I.

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Fig I

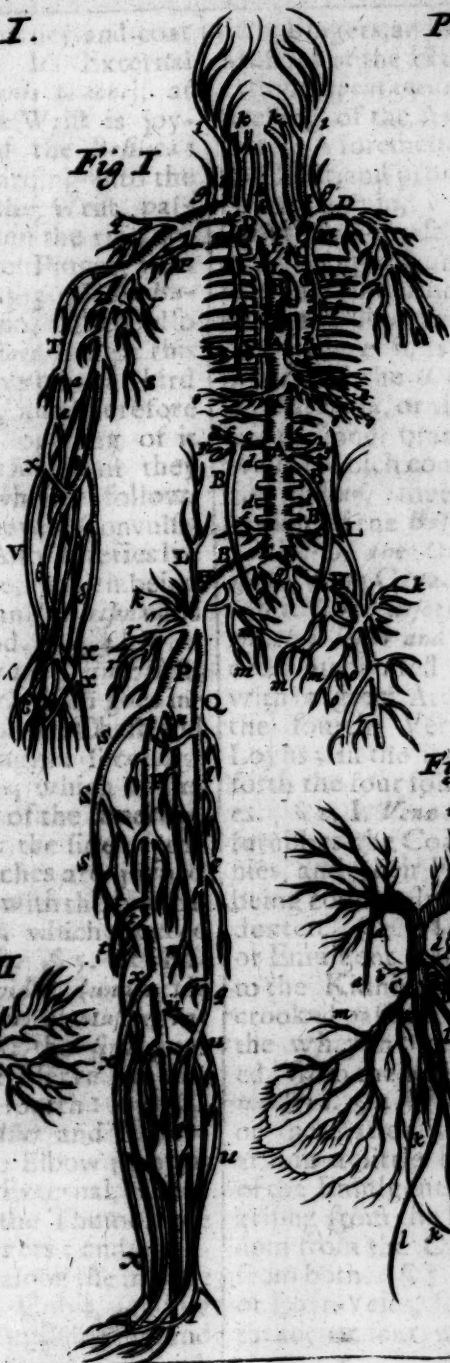


Fig III

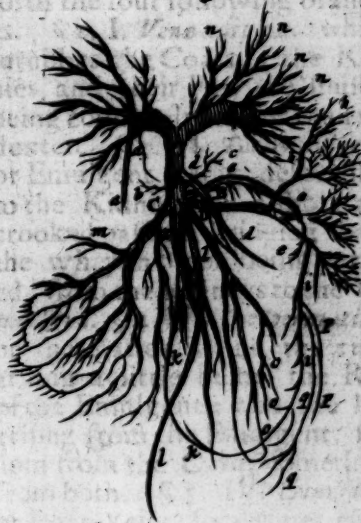
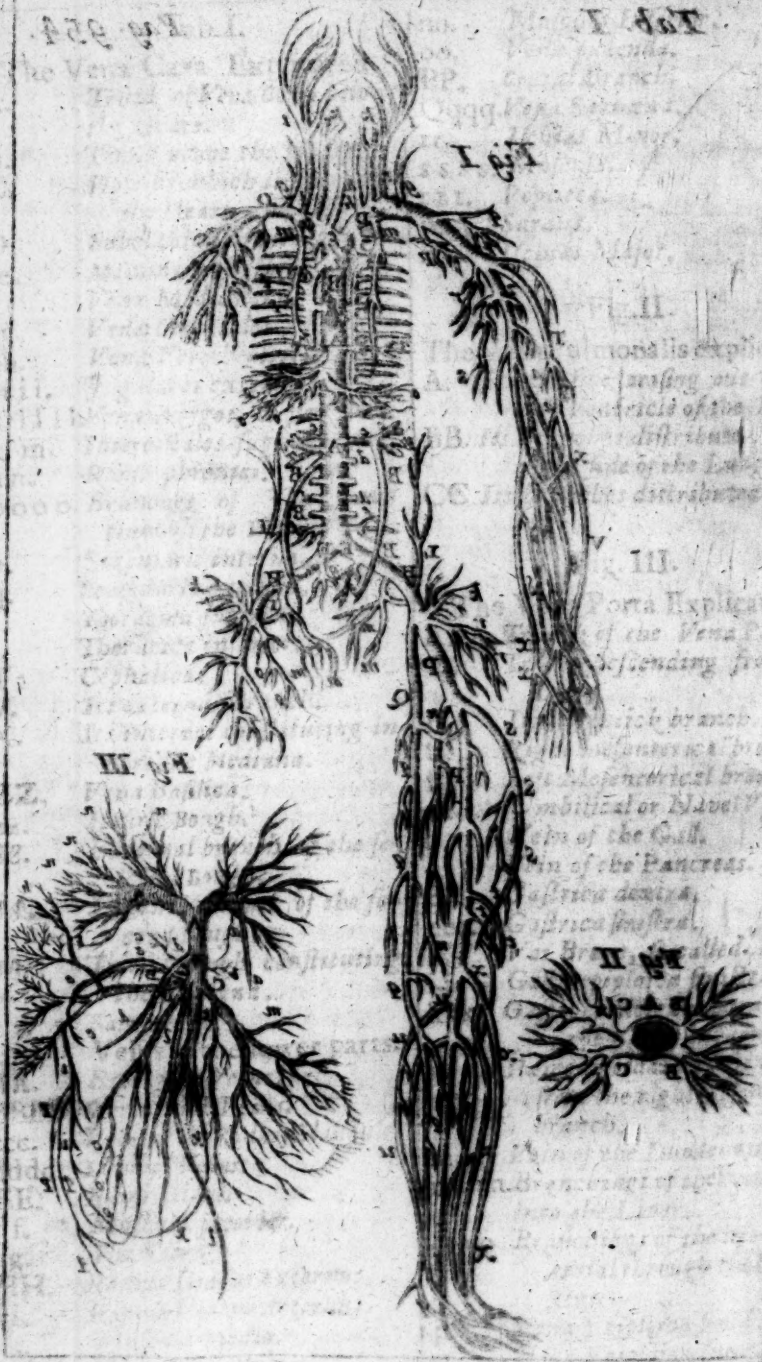


Fig II





the fleshy Membranes and coat of the Muscles. Its External Branch called *Funnus Brachij*, at the middle of the Wrist is joynd to a branch of the *Basilica*: and afterwards arising into the outward side of the Wrist, passing along between the ring finger and the little Finger, it is called *Salvatella*. § 3. II. The *Basilica* or Liver Vein, called also *Epatica* and *Jecoraria*: near this Vein lyes a Nerve of the third and fourth pair, and therefore Chyrurgeons in opening of it ought to be careful, least they wound it, from whence follows great pain, a Feaver, Convulsion and Death: Also Arteries lye beneath the same, which being hurt may cause an *Aneurisma* and effusion of blood. § 4. From the *Basilica* arises two Veins: first, *Thoracica superior*, which goes into the Muscles of the Chest, and into Womens Duggs: secondly, *Thoracica inferior*, which sometimes grows out of the superior, creeping all over the side of the Chest: its branches are joynd by *Anastomosis*, with the branches of the *Azygos*, which proceed out of the Chest. § 5. The *Basilica* also is divided (under the Tendon of the Pectoral Muscle) into three branches: the first goes along with the Nerve of the Arm called the fourth: the second called *Medius* and *Profundus*, beneath the Elbow joynt, is divided into an External, which sends Veins to the Thumb, fore and middle Fingers; and an Internal, running along the middle bone of the Cubit, sending branches to the middle, ring, and

little Fingers, and to the internal Muscles of the Hand: the third, called *Subcutaneus*, at the inner swelling of the Arm, is divided into I. A foremost, passing along the Cubit, and produces another eminent Vein, which proceeds sometimes directly, and sometimes obliquely unto the Wrist; II. And a hindermost, descending under the *Ulna* by the little finger, where it is joynd to a branch of the *Cephalica*. § 6. III. *Mediana*, or the *Middle Vein*, It is the inner branch of the *Cephalica*, which constitutes in part the *Median*, meeting with a branch of the *Basilica*.

VII. Of the Descendent Trunk of the Vena Cava.

§ 1. The descendent Trunk, which is lesser and narrower, proceeds undivided (accompanied with a great Artery) as far as the fourth Vertebra of the Loyns; in the interim it sends forth the four following branches. § 2. I. *Vene adiposee*, which furnishes the Coats of the Kidnies, and their Fat, the sinister being commonly higher than the dexter. § 3. II. *Toe Emulgens*, or Emulgent Veins, descending to the Kidnies, by a short and crooked passage, bringing back the wheyish blood being purified, from the Kidneys to the *Vena Cava*. § 4. III. *The Spermaticee*, or spermatick Veins, the right arising a little below the Rise of the Emulgent; and the left arising from the Emulgent, seldom from the Cava, sometimes from both. § 5. IV. *Lumbares*, or Loyn-Veins, sometimes two, three, or four, which are carried

ed between the four Vertebrae of the Loyns. § 6. After these Branches, the Trunk goes towards the *Os sacrum*, and at the fourth Vertebra of the Loyns, it goes under the *Aorta* (over which it went before) and is divided into two branches, called *Rami Ilij* or *Iliaci*, because they goe over the *Os Ilij* and *Os Pubis* unto the Thigh: These Iliack Branches, as soon as they have left the Cavity of the Belly, are called *Vene Crurales*, or the Leg Veins.

VIII. Of the *Rami Ilij* or *Iliaci*.

§ 1. About the division arises two Veins, first *Muscula Superior*, which sends Veins to the *Peritoneum*, and Muscles of the Loyns and Belly: Secondly, *Vena Sacra*, which is sometimes single, sometimes double for the marrow of the *Os Sacrum*.

§ 2. From thence the *Ramus Iliacus* is forked out on each side into the External greater, and Internal lesser. § 3. From the Internal lesser, proceeds two Veins; first, *Muscula Media* without, which sends Veins to the Muscles on the outside of the Hip, and skin of the Buttocks: secondly, *Hypogastrica*, which is sometimes double, sending Veins to many parts of the *Hypogastrium*, as to the Bladder, and its Neck, to the *Penis* or *Yard*; to the Muscles of the *Intestinum rectum*, whence are the *Hemorrhoides Externæ*, and to the lower side and Neck of the Womb, whence are those Veins, by which it is thought the Courses flow in Maidens and Women

with Child; but when the Courses are right and naturally voided, they flow from the Arteries, as appears by their excellent colour, and the common Office of the Arteries. § 4. From the External greater proceeds three Veins: I. *Ep gastrica*, which sends Branches to the *Peritoneum*, and Muscles of the *Abdomen*; the principal part ascends, (under the right Muscles,) to the *Mammariæ*, with whom they are often joyned about the Navel. II. *Pubenda*, which sends to the privy parts in Men and Women, and goes cross to the middle of the *os Pubis*. III. *Muscula Inferior*, which passing over the Hip, serves the Muscle and skin of the part; from hence downwards the Iliack branches, as soon as they have left the Belly are called *Crurals*.

IX. Of the Crural Veins.

§ 1. The Crural Veins (as also the Arteries and Nerves) are interwoven with little Glandules, in the bending of the Thigh, for strength sake: and from the said Veins proceed six branches.

§ 2. I. The *Ischias* or *Ischiatica minor*, which is opposite to the *Saphæna*, being a short extern branch, springing from the Crural; it serves the skin and Muscles of the Hip. § 3. II. *Ischias* or *Ischiatica major*, sends branches to the Hip, and a part to the Muscles of the Calf, and then divides its self into ten branches, bestowing a couple upon each Toe. § 4. III. *Poplitea*, the Ham Vein, made of a double crural Branch, mixed to-

together : it runs straight along under the skin behind, through the midst of the bending of the Ham, as far as to the Heel, sometimes to the skin of the external Ankle. § 5. IV. *Suralis*, it is a great Vein, and is divided in the external and lesser and internal and greater; and each of them again into exterior and interior; all which send Veins to the Muscles of the Calves of the Legg. § 6. *These on the back of the foot*, being mixed with the *Poplitea*, make the same various texture of Veins, which are seen under the Skin. § 7. V. *Saphæna*, so termed from its apparency,) or *Vena Maleoli*, the Ankle-Vein, is long and large, carried on through the inside of the Thigh (with a Nerve by it) between the skin and *Membrana Carnosa*, to the Knee; and from thence by the inner part of the Leg, it runs to the inner Ankle, and so to the upper part of the Foot and Toes, especially to the great Toe. § 8. VI. *The Muscula*, a Vein arising from the Trunk or Branch hidden among the Muscles: it is double and remarkable, giving Veins to the Muscles of the Thigh. § 9. *Lastly, as to the Veins of both Arms and Legs, these things are to be noted; first*, that their various branches send diverse Twigs outward to the skin, called cutaneous Veins: *secondly*, that even the grand branches are variously distributed in every person, being seldom in one man as they are in another: and that the right Arms or Legs, do rarely agree with

the left: *Thirdly*, that in opening of the Veins of the Foot, you may indifferently make choise of any, seeing they are all derived from one and same Trunk.

X. *Of the Vena Porta, or Gate Vein,*

§ 1. *The Vena Porta, or Gate Vein*, is the next great Vein to the *Cava*; its prime Original is the *Vena Umbilicalis*, or Navil Vein, the first of all the Veins arising from seed, and that by which the Child is nourished in the Womb,) afterwards it is said to rise out of the hollow part of the Liver, where with many roots it is inserted. § 2. *Without the Liver it is produced into Trunk and branches*, being not so compact as the *Cava*, but more loose and soft. § 3. *The Trunk, before it is divided into lower Branches*, sends two small Veins to the Gall Bladder, called *Cystica Gemellæ*, or *Venæ cysticae*: and another Vein to the Stomach, called *Gastrica Dextra*, or *Pylorica*, which is divided about the lower Orifice of the Stomach. § 4. *Afterwards the Trunk is divided into two eminent lower branches, viz. the Splenetick and the Mesenterick.* § 5. *Ramus Spleneticus*, (sometimes joyning to the Sweetbread, and sometimes passing through it) goes into the Spleen: before it is divided, it sends from it self, two upper branches to the stomach, first *Gastrica Sinistra*, or *major* (the largest of all the stomach Veins) which afterwards constitute the *Coronaria*; then it sends lower branches, one to the *Omentum* or Caul; and

and one to the *Pancreas*. § 6. *Afterwards the Trunk of the Ramus Splenicus is divided into the upper and lower branches: the former produces the vas breve, and other little branches carried into the Spleen: the latter produces,* I. *Gastroepiploica Sinistra*, which runs out upon the bottom of the Stomach, and gives many branches both to the stomach it self and to the *Omentum*. II. *Vena Epiplois* or *Epiploica Sinistra*, which runs out upon the same parts. III. *Multitude of other small branches*, which are sent up and down all over the Spleen. § 7. *The Mesenterick branches of the Vena Porta, called Ramus dexter*, (whose principal part goes into the Mesentery) sends forth (before it is divided) two Veins. I. *To the Guts*, viz. a Vein to the middle of the *Duodenum*, and beginning of the *Jejunum*, from whence certain capillary twiggs goe through the *Pancreas* and *Omentum* upwards. II. *To the right side of the Stomach and Omentum*. § 8. *Afterwards the Trunk of the Ramus Mesentericus is divided into two parts, to wit, the right and the left*. § 9. *The right hand Mesenterick branch is twofold*. I. *Gastroepiploica dextra*, which runs to the bottom of the Stomach (and joyns with the *Gastroepiploica sinistra*) sending branches through the *Omentum* and Stomach. II. *The right Mesenterick branch* it self, which is divided into 14 nameless little brances, and those again into innumerable other little Veins, which are called *Meseraick Veins*, and are disper-

led into the Guts *Jejunum*, *Ileon*, *Cecum*, and part of the *Colon*. § 10. *The Use of the Meseraicks*: The Ancients thought them to suck the *Chylus* out of the Stomach and Guts, and so to convey it by the Trunk of the *Vena Porta* to the Liver to be made or changed into Blood: but in this they were deceived, for these Reasons: 1. Because the milky juyce of the *Chylus* is never found in them, they being always full of Blood. 2. By Ligatures in living Creatures, *Valens* found that the *Meseraick Arteries* swelled towards the Liver, but were empty towards the Guts. 3. That the *Valves* of the *Meseraick Veins* (found out by *Harvey*) look only towards the *Vena Cava* and *Porta*, which *Columbus* also observed, and thereby hinder the Blood for passing into the Guts. From hence then appears the true Use of the *Meseraick Veins and Arteries*; viz. That the *Meseraick Arteries* carry blood to the Guts for their nourishment, and the remaining blood which is more than necessary for the nourishment of those parts, is returned back to the Liver by the *Meseraick Veins*, through the *Porta*, and that the *Vene Lacteæ* only suck the *Chylus* out of the Guts, and empty it by the *Mesentery* and *Pancreas* into the *Vena Porta*, by whose Veins it is carried into the Liver, that it may be mixed with the *fermentum* brought from the Spleen, and so receive the form of Blood. § 11. *The left hand Mesenterick branch*, first, sends out the *Vena Hemorrhoidalis Interna*; which dif-

diffuses it self through the Mesentery, and sends forth branches to the Spleen, Womb, and *Intestinum rectum*, which is the internal Hæmorrhoidal Vein: hence appears a communion between the Womb, and the Hæmorrhoidal of the Anus, and that possibly the Courses or Terms may be conveyed also this way.

§ 12. *Afterwards this left Mesenterick branch*, spreads its self abroad into the left and middlemost part of the Mesentery, whence comes I. *Vena Cæcalis*, which goes to the blind Gut. II. *Ramus Mesocolicus*, which from the left side of the stomach goes to the Gut Colon. § 13. *The Uses of the Vena Cava and Porta*. The first receives the cruder blood from the Arteries and remits it to the Heart: The *Vena Porta* takes the Blood not sufficiently elaborated, from the Arteries, and carry it to the Liver, for the more perfect concoction and separation of the Choller.

XI. Of the Hemorrhoidal Veins.

§ 1. *The Hemorrhoidal Veins*, are situate in the Fundament or *Intestinum rectum*, and are of two kinds, either internal or external. § 2. *The Internal* proceed from the *Vena Porta*, as we have declared in Sect. X. § II. just aforegoing: the *External* from the *Vena Cava*, with which the Hæmorrhoidal Arteries are associated, and through which the Humors to be evacuated are carried. § 3. *They differ*, I. *In their Original*: the Internal arise as aforesaid from the *Porta*, and descend along by the end of the Colon, under the right Gut,

the end of which it circularly embraces with certain small Twigs; sometimes it arises from the *Ramus Splenicus*, from whence is the *Vas breve*; and sometimes from the Spleen it self, which *Casseri* and *Veslingus* observed: the External arise from the *Hypogastrick* branch of the *Cava*. § 4. II. *In their Insertion*: the Internal is inserted into the substance of the *Intestinum rectum*, which is Membranous; the External are inserted into the Musculous substance of the Anus. § 5. III. *In their number*: the Internal is one only; the External are three in number. § 6. IV. *In the quality of the Blood*: the Internal contains thick, black blood, made in the Spleen, and communicated by the *Arteria Cæliaca* or *Splenica*; the External has blood thinner and redder, elaborated in the Heart, and brought hither by the branches of the Arteries. § 7. V. *In their Use*: the opening of the Internal, are said to help Obstructions of the Spleen, and to cure a *Cacochymia* or badness of Humors: the opening of the External, are thought to cool and refresh the Heart, and by accident to help Obstructions of the Liver, and cure a *Plethoria*, or too great a fulness of good Blood, (if there is such a thing) § 8. VI. *In their evacuation*: the Internal, have a flux not very plentiful, with a great deal of pain: the External emit a flux so large as may sometimes cause Death, or some grievous Disease, but without any pain at all. § 9. VII. *In their descent*: the

the Internal descend alone, not associated with Arteries: however the Arteries are either hidden, or they depend on Arteries not far off: the External descend with Arteries to the Muscles of the *Anus*: and therefore the External *Hæmorrhoids* may more properly be called *Vasa Hæmorrhoidalia*, whereby the Arteries are included with the Veins.

XII. Of the *Venæ Lactææ*, or *Milky Veins*.

§ 1. The first that discovered these Veins was Casper Asellius, an Anatomist of Ticinum, Anno 1622. July 23. in the Dissection of a living Dog well fed: after him others made the attempt with like satisfaction; it being apparent to the Eyes, that these Vessels full of a milky juyce, are peculiar passages, much differing from the *Meseraicks*: they are always to be seen in living Creatures, if they be dissected about four hours after they have been well fed, because the *Chylus* has then a more special distribution: after that time they are not to be seen, but only empty, wherein they appear like little *Fibres*, which some have mistaken for Nerves; but Nerves have neither such a *Chyle* nor *Valves*, nor any Cavity, and some few Arteries, but these have but a single Coat, and no pulsation or motion. § 2. They are called *Lactes*, or *Lactæa vasa*, and *Venæ Lactææ*, either from the obsolete word *Lacio*, which signifies *Allicio* to draw, because they suck or draw the *Chylus* out of the Guts: Or à *Lacte*, from Milk, which they resemble in whiteness, softness

and fatness. § 3. Their *sejourn* is in the *Abdomen*, where they are for the most part accompanied with Fat, to cherish the natural heat for attraction and concoction of the *Chylus*; from the Guts they are carried through the *Mesenterium*, by an oblique passage, sometimes with other Vessels, sometimes without, sometimes parallel with, and sometimes crossing them, through many *Glandules* or *Kernels*, placed chiefly at the parting of the branches, till they fall into the *Pancreas*, or great *Glandule* of the *Mesentery*; and the *Lumbar Glandules* situate near the left *Kidney*, in which places they are wreathed together this way and that way, into very many inexplicable wreathings and *Labyrinths*. § 4. Each of these *Glandules* (saith *Barbet*) send forth a branch, which joining above the left *Kidney*, constitutes a Vein called *Vena Lactæa*, about the bigness of a great Quill: this great *Lactean Vein*, lying between the *Arteria Aorta* and the *Vertebræ* of the *Loyns*, covered with Fat, runs upwards, and above the Heart, ascends by the Gullet, and so hastens to the left *Subclavian Vein*, where it ends in one, two or three branches: Here a most thin *Valve* occurs at the very end of the Vein, looking inwardly, that the *Chyle* might not run back again, or run farther into the Arm: out of this *Subclavian* they descend by the ascending trunk of the *Vena Cava* into the right Ventricle of the Heart, that there, by the help of the heat and

and natural faculty, it may be changed into Blood. § 5. But *Kypersus* and *Regius*, think, that the Milky Veins being confounded by the *Mesaraicks* in the *Pancreas*, do there empty their Chyle into the *Vena Porta*, from whence it is carried by the Veins into the Liver, that it may be mixed with the *fermentum* brought from the Spleen, and so receive the form of Blood. § 6. And *Bartholine* saith, That from the *Pancreas*, they sending greater branches by the sides of the *Vena Porta*, and sometimes branches or twigs to the *Vena Cava*, enters with small branches into the Cavity of the Liver, from thence being carried to the Liver it self, and split into very small Fibres, they are so long spread up and down into the flesh thereof, every way, till they are at length quite obliterated: but into what part of the Liver, either the Trunk or branches are inserted, he had not yet found by any determined, by reason of the sudden efflux of humors. Now with the branches of the *Vena Porta* they go farther inwardly to the rest of the Lobes and their *Parenchyma*: but *Bartholine* thinks they may be inserted about the third Lobe, where the Gall-Bladder is placed, either to assist concoction (which he thinks begins there) or to receive the Choleric Excrement, which in the Concoction of the *Chylus* is separated therefrom. § 7. *Alexander Read* seems to be absolutely of *Bartholines* opinion; and saith farther that they (the *Lactal Veins*) dis-

charge the impurities of the *Chylus* in the *Pancreas*; after which the grosser part of the *Chylus* is sent to the branches of the *Vena Porta*; and the subtillest and purest to the branches of the *Vena Cava*: to confirm his opinion of their passage to the Liver: he saith, They have no Trunk, because they were made to end in the Liver, and go no farther. § 8. They are inserted into all the Guts, yea, into the *Duodenum*, but especially into the smaller Guts; not so many into the thick ones, nor are any of them carried to the Stomach or Spleen: lest the *Chylus* once received should slip back again into the Guts, they are furnished with Valves which look from within outward, being so placed to hinder the regrest of the *Chylus* into the Guts, though driven back with violence. § 9. Their substance is the same with that of a Vein it self, which it resembles in all things, the milky juyce only excepted; having but a single Membrane; though in the *Mesentery*, they receive from it another external Coat. They grow continually one to another, of an unequal magnitude; being for the most part small, least the thick and unprofitable parts of the *Chylus* should go into them; or least they should make a distribution thereof too suddenly: They are also infinite in number dispersed through the Liver, Guts, *Mesentery*, and *Pancreas*; and so much the more in number, that their plenty may make amends for their smallness. § 10. They are colder and moister

than the ordinary Veins ; very thin, exceeding subtil (where they enter into the Body of the Liver) tender, smooth outwardly, rare but rough by reason of their Fibres within them.

§ II. *The reason or cause of their sudden disappearing*, is the strong attractive or drawing force of the Liver, in so great Anxiety of the Animal, by which the Spirits being consumed, there is need of new Flesh and Chyle speedily to be digested. § 12. *Their Action and use is*, I. To Carry or Convey the Chylus to the Liver. II. To digest and better concoct the Chyle, to make it more fit to receive the form of Blood in the Liver : for the Chyle is not changed at all till it comes into the Liver, where it grows red-

dish by little and little. III. To *show a ready way* for the distribution of the Chyle ; that the Blood is made in the Liver, not in the Veins ; and that the sucking of the Veins is no cause of hunger, because none are carried to the Stomach. IV. To *show the Causes of some Diseases*, before obscure ; as, Of the Chylous flux of the Guts (when they are obstructed, or do not draw, because the Liver is weak :) Of Hypochondriack Melancholy : of an Atrophia or pining away of the Body, for want of nourishment, by reason of the Glandules of the Mesentery being filled with Scirrhus Swellings : Of Intermitting Agues quartered in the Mesaraeum, &c.

CHAP. IV. Of ARTERIES.

I. OF an Artery in general.

§ I. *Ἀρτηρία, Arteria*, an Artery, is a similar, spermatick, membranous, long, round, hollow part, a common pipe-like Organ, consisting of a double Coat, proceeding from the Heart, joyned every where to the Veins, by the assistance of many Osculations or Anastomosis, containing and carrying the nutritious Blood and Vital Spirits to all parts of the Body. § 2. It is called *Arteria*, from its containing and preserving Air or Spirit ; and therefore the Ancients ; as, Hippocrates, Plato and Aristotle call the Wind-Pipe *Arteria Magna* : but Galen makes a distinction, and calls the Wind-pipe *Aspera*

Arteria, the rough Artery, and those of which we here speak *Arteriae leves*, the smooth Arteries, which Aristotle calls sometimes *Venam Aortam*, and sometimes simply *Aorta*. § 3. *Their Anastomosis with the Veins are of sundry kinds*, as Parallel, Cross, and with acute and oblique Angles. § 4. *Their Efficient cause is, vis propria Arterias generans, called in Greek ἀρτηροποιητική, Arteropoietice*, the the proper Artery making power or faculty : the matter is a cold clammy part of the Seed : the Original of their Dispensation is the Heart, and they proceed out of the left Ventricle thereof, & not the middle (as Aristotle would have it)

it) and therefore the *Aorta*, or *Arteria Magna* proceeds particularly from the left Ventricle: but the *Pulmoniac Arteria* (falsly called by the Ancients *Vena Arteriosa*) from the right Ventricle. § 5. *Their ends or uses are, first*, to carry the Vital Blood and Spirits (made in the Heart) to all parts of the Body: *Secondly*, to breed Animal Spirits in the noble Ventricle of the Marrow, (to wit) the Brain: *Thirdly*, for the nourishment of the Body, and all its parts, which are only nourished by the Arterial Blood, and not by the Venal: *Fourthly*, to carry the Excrements of the Body and Blood, either to the outward parts of the Body, or to the Kidneys, or Mesentery, or Womb, or Hemorrhoidal Veins, &c. § 6. *The Arteries flow only by Pulsation*: whereby *first*, the heat of the parts is cooled and tempered: *secondly*, the nourishing Arterial Blood is cast continually into the smallest and most remote Arteries: which is proved by the continual Pulsation of the Heart, which drives the Blood into the greater Arteries, from which it cannot return, because of its firm *Valves* too strong to break;) and from hence into the very smallest Arteries, and fleshy parts of the Body: Now these parts being nourished, not taking all in which is sent, do return back the superfluous Blood by the Veins, that may be Circulated: Moreover an Artery being bound in any part of the Body, is filled, and always swells towards the Heart; but is ever emptied on

the other side, towards the smallest Arteries and parts: whereas on the contrary, a Vein being bound, is always empty towards the Heart, and full on the contrary side of the Ligature; the which thing is every day plainly demonstrated in Blood-letting, where the Arm being only (so hard bound, as to compress the Vein, but let the Pulse remain: the Vein being opened below the band, Blood plentifully flows forth (yea by it all the Blood of the Body may be drawn out) now this flux of Blood cannot come out of the Veins because they are stopped by the Ligature, and therefore must needs be brought from the Arteries beneath by *Anastomosis*. *Thirdly*, The Stagnation of the Venal Blood is prevented: for the Pulsation keeps it always in motion, by forcibly casting the more than necessary Arterial blood for nourishment, into the Veins, which convey it to the Heart, for supply least it should be destitute of its Sanguine humour, by its continual expulsion. § 7. *The Cause of the Pulsation, or Pulse is according to Bartholine, from both the Blood filling, and the faculty of the Arteries directing. But I judge the cause to be from Spirit, Wind, Air or Breath: for if you blow with a Reed or Pipe being put into Water, it will make an apparent Pulsation or Bubbling, much more if the water was contained in long narrow Vessels with Valves, that it might not return back: but if you suck with the Pipe, then it runs smoothly, without Pulsation, or leaping: therefore*

the Blood in the Arteries flows with Pulsation, from the expulsive faculty of the Heart, caused by its Spirits: but it flows in the Veins smoothly, or without pulsation, because it is sucked, or drawn back again by the attractive faculty, caused by want of Spirits, or Blood, or their being wasted by the Hearts perpetual Expulsion. § 8. *The Situation of the Arteries is deep, always under the Veins both in the External and Internal parts, (the Abdomen, a little below the Kidneys, only excepted; for after that the Vena Cava and Aorta, descending from the Diaphragma, have passed the Region of the Kidneys, the Cava hides it self under the Aorta, through all that Region, till they pass out of the Abdomen; and then the Artery does again hide it self under the Cava.)* § 9. *The Magnitude of the Aorta is very great; but the Descendent part is greater then the Ascendent, because the number of the Internal parts, is greater than of the External.* § 10. *The number of the Arteries is less than of the Veins; because the passage of the Blood is quick through the Arteries, but slow through the Veins; but there are more Arteries than we can well discern, because the Capillary Arteries are very much like to Veins.* § 11. *The Substance of the Arteries is Membranous, so that they can be both distended and contracted, more than the Veins: and it consists of two peculiar Tunicles: the exterior is thin, soft, and rare like the Tunicle of a Vein: the interior is compact, hard and very*

thick, five times thicker than the Tunicle of the Veins; that thereby, the Arteries may be strong to endure their perpetual motion, and to keep in their thin and spirituous Blood, which would soon vanish and fly away. As to their shape, it is long, round, hollow, and smooth, like a Pipe or Channel. § 12. *As to their passages, some terminate in the Guts, by which Expulsion of Excrements is caused, some have their Mouths terminated in the Skin, through which the External Air is attracted, and fuliginous Vapors expelled: and some think that they are also inserted into the Bones, but Placetus denies it.*

II. *Of the Arteria Magna, or Aorta, the great and chiefest Artery.*

§ 1. *It comes from the left Ventricle of the Heart, with a wide Orifice: it has (as before said) a double tunicle, the innermost of which is five times thicker; least by continual pulsation about the hard and solid parts, it might incur an incurable Rupture: it receives three Valves, called Sigmoïdes, looking outwardly.* § 2. *Coming out of the Ventricle of the Heart, before it perforates the Pericardium, it sends forth to the Heart it self the Coronaria Arteria, which compasses the Basis of the Heart, sometimes single, sometimes double.* § 3. *Afterward coming through the Pericardium or Heart bag, it is divided into two Trunks, the lesser ascending: and the greater descending.*

III. *Of the lesser or Ascending Trunk*

Trunk of the Aorta, or Arteria Magna.

§ 1. *Ascending Trunk resting upon the Wind-Pipe*, provides for all the parts about the Heart: and is divided into 2 subclavial branches viz. *ramus subclavius dexter and sinister*; the latter rising lower, and going more obliquely to the Arm. § 2. *The Arteria subclaviae*, before they go out of the Thorax (for afterwards they are called *Axillares*) do from their lower part produce the *Intercofiales superiores*, proper to three or four upper Ribs.

§ 3. *From their upper part arises four Arteries.* I. *Mammariae* which go to the Duggs. II. *The Cervicales*, which go to the Muscles of the Neck. III. *Arteria Muscule* which are approximate to the Jugular Veins. IV. *The Carotides* or *sleep-Arteries*, which are two, unequal, and ascend upwards right to the Head by the sides of the Wind-Pipe, being knit unto the *Internal Jugulars*: when they come to the Fauces, before they enter the Skull, they give branches to the Larynx and Tongue, and then they divide themselves into the *Carotis externa* and *Carotis interna*.

§ 4. *The Carotis externa*, being the lesser, furnishes the Cheeks and Muscles of the Face: at the root of the Eares it is divided into two branches; the I. is sent to the hinder part of the Ear, whence arises two other branches, which go to the lower Jaw, and the root of all the lower Teeth: the II. goes to the Temples, the Forehead, and Muscles of the Face. § 5. *The*

Carotis interna, at the saddle of the *Os Sphenoides*, under the *Dura Mater*, makes the *Rece Mirabile*, then passes through the *Dura Mater*, and sends forth two branches. § 6. *The first, which is the lesser*, goes with the *Optick Nerve* to the Eyes: the *second, which is greater*, ascends to the side of the *Glandula pituitaria*, and is distributed through the *Pia Mater* and the substance of the Brain.

IV. Of the Axillary Artery.

§ 1. *When the Subclavials have left the Brest or Thorax*, they are called *Axillares*, and carry nourishment to the outward part of the Brest, and to the whole Arm. § 2. *From the Axillaris (before it comes to the Arm) in the lower part does arise.* I. *The Thoracica superior* or upper Brest Artery: II. *Thoracica inferior*, or lower Brest Artery: III. *The Scapularis*, or Shoulder-blade Artery. § 3. *From the upper part of the same Axillaris, arises the Humeraria*: the remainder goes from the *Axillary* on each side to the Arm; where it is carried along through the Arm, descending between the Muscle, with a Vein and Nerve of the Arm. § 4. *Under the bending of the Elbow, it is divided into two fair branches*, the upper and the lower, which accompany the branches of the *Vena Cava*, and are called by the same Names. § 5. *The upper goes right forwards through the middle to the Wrist*; where the Pulse is commonly felt: from thence proceeding under the ring shaped Ligament, it be-

Tab. II.

The Aorta or Arteria Magna Explicated.

A. Original of the Aorta from the Heart.

aa. Its ascending Trunk, whence arises

CC. Arteriæ subclaviæ: from these

dd. Arteriæ Carotides: whence

ee. Ramus exterior.

ff. Ramus interior.

gg. Arteriæ Vertebrales or Cervi-

hh. Arteriæ Musculæ. (cales.

ii. Arteriæ Mammariæ.

kk. Arteriæ intercostales supe-

ll. Scapularis interna. (riores.

mm. Scapularis externa.

nn. Thoracica superior.

oo. Thoracica inferior.

pp. Ramus Axillaris.

qq. Ramus ejus superior.

rr. Ramus ejus inferior.

Arteries in the lower parts.

B. Arteria Trunk descending.

aaaa. Intercostales inferiores.

bb. Arteria Phrenica.

C. Arteria Cœliaca.

d. Ejus Ramus dexter.

e. Ramus ejus sinister, or Arteria splenica.

f. Arteria Gastrica dextra.

g. Arteria Gastrepiploica.

h. Arteria Epiploica.

kk. Arteria mesenterica superior

ll. Arteriæ Emulgentes.

mm. Arteria Spermatica.

nnnn. Arteriæ Lumbares.

oo. Mesenterica inferior.

pp. Rami Iliaci.

qqqq. Arteria Iliaca externa.

R r. Iliaca interna.

S. Arteria sacra.

tt. Hypogastrica ad Intestinum rectum & Pudendum.

uu. Hypogastrica going to the Umb.

XX. Arteriæ Umbilicales.

ZZ. Arteriæ Epigastrica.

ΔΔ. Arteriæ Crurales.

αα. Arteriæ pudendæ.

ββ. Muscula Inferior.

εε. Muscula Cruralis externa:

nn. Muscula Cruralis interna.

θθ. Popliteus Ramus Arteriæ.

κκ. Suralis ejusdem Ramus. (Toes.

λλ. Branches sent on the Foot and

Fig. II.

The Arteria Pulmonalis Explicated.

A. The beginning where it passes out of the right Ventricle of the Heart.

BB. Its Branches which pass to the right part of the Lungs.

CC. Its branches which pass to the

Fig. III.

(left.

The Mesaraick Veins and Arteries, with the Vena Lactæa

Explicated.

AAA. Hollow part of the Liver.

B. The Gall. (upwards.

C. Umbilical Vein bowed

DD. Stomach turned upwards

E. Its lower Orifice tied with

a string.

F. A part of the Jejunum

cut off near the Pylorus.

GGG. The Pancreas of a fawn

H. The Spleen. (bigness.

II. The right Kidney covered

with the common Mem-

brane.

K. The left Kidney in like

manner covered.

LLL. The Mesentery stretched

abroad. (Mesentery.

MMMM. The Guts knit to the

aaaa. Lactæal Veins sent from

the Pancreas to the Liver

bbbb &c. Lactæal Veins going from

the Guts to the Pancreas

cccc &c. Mesaraick branches of

the Vena Porta.

dddd &c. Branches of the Mes-

araick Arteries.

Fig. I.



Fig. III



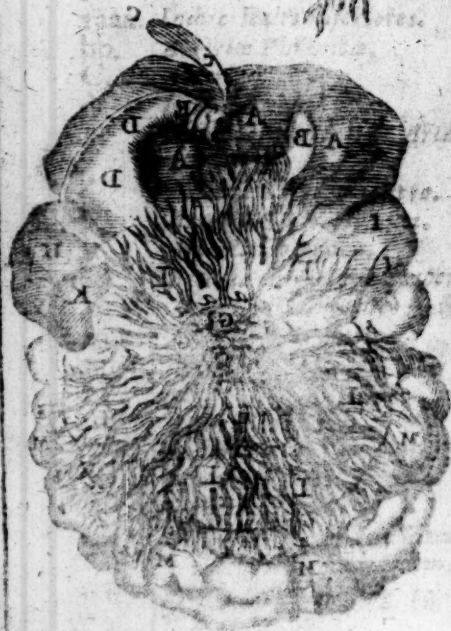
Fig. II.



Tab. II.



Fig. III.



Rows branches upon the Thumb, Fore-finger, and middle Finger.

§ 6. The lower branch runs through the Ulna to the Wrist, and sends twigs to the ring or little fingers, and so proceeds to the Wrist beneath, where the Pulse may also be felt especially in such as are lean, and have a great Pulse: but the beating of the Pulse is much better felt in the upper branch, for that it is less covered or hid by the Tendons.

V. Of the greater or descending Trunk of the Arteria Magna, or Aorta.

§ 1. The descending Trunk sends out branches from it self, into the Thorax, Abdomen, and Thighs.

§ 2. Whilst it is yet in the Thorax, it sends forth two Arteries:

I. The *Intercostales Inferiores*, which runs to the Intervals of the eight lower Ribs, and the neighbouring Muscles: By these *Intercostales*, *Spigelius* saith, That Quittor and Water, collected in the Thorax, are received into the great Arterie, and thence by the emulgent Veins carried into the Bladder: the reason is, because the said Quittor, is more easily carried through the Arteries, and the way is shorter: and also it more readily follows the Motion of the Arterial Blood than of the Venal. § 3. II. The *Phrenica* which sends to the *Diaphragma* or Midriff; and *Pericardium* or Heart-bag. § 4. The rest of the Trunk peirces through the Clift of the *Septum*, and sends ramifications through the *Abdomen*: some of which go along with branches of the *Vena Porta*; others the branches of the *Vena*

Cava. § 5. Those branches arise from this lower Trunk in the Abdomen, in this order, 1. *Celiaca*. 2. *Mesenterica superior*. 3. *Emulgens*. 4. *Spermatica*. 5. *Mesenterica inferior*. 6. *Lumbarij*. 7. *Muscula superior*. All of which accompany the branches of the *Cava*, except the *Mesenterica inferior*: and the *Celiaca*, *Mesenterica Superior* & *Inferior* accompany the *Porta*. § 6. I. The *Celiaca* (so called from its sending many branches to the Stomach) springs from the *Aorta*, being underproped by the *Omentum*, and is divided into two branches, first the *Ramus dexter* which is the smaller, and the *Ramus sinister* which is the greater: these under the hinder part of the Stomach are joyned to the *Vena Porta* in the *Pancreas*. § 7. *Ramus dexter*, ascending the Cavity of the Liver, and going on a little forwards on the higher side sends forth, 1. *Gastrica dextra*. 2. *Cystica Gemella*: from the lower side, 1. *Epiplaica dextra intestinalis*. 2. *Gastroepiplaica dextra*, in imitation of the *Vena Porta*, to which we shall here refer you: The remaining part of the *Ramus dexter* runs into the hollow Surface of the Liver. § 8. *Ramus sinister*, is the *Arteria Splenica*, very large, that it may give sufficient Vital Blood to the Spleen, being drawn out into the *Vena Splenica*, by a crooked way it goes to the Spleen, and spreads many branches, just as does the *Vena splenica*. § 9. II. *Mesenterica superior* is dispersed almost into the whole Mesentery, and constitutes the *Arteria Mesaraica*

in the Gut *Jejunum*, *Ileon*, and part of the *Colon*. § 10. The Use of the *Arteria Mesaraica* are first, to give native heat to the parts in which they are inserted, and parts adjacent: secondly, in illness and sickness, to receive the excrements of the whole Body, as the *Mesaraick Veins* do, to empty them into the Guts, as *Spigelius* thinks: thirdly, to carry the Arterial Blood to the Guts (according to the principles of *Wileus*) for their Nutriment: which motion of the Blood, Ligatures do demonstrate in live Anatomies: for the *Mesaraick Arteries* being bound do swell towards the Trunk and Heart, and are empty towards the Guts which suck in the Blood, and send back what is superfluous through the *Mesaraick Veins* to the Liver. Some would have these *Mesaraick Arteries* to draw *Chyle*, but that cannot be, for *Chyle* was never seen in them only Blood; and they receive nothing from the parts, but communicate where they are inserted: nor can they carry *Chyle* to the Heart because the *Valves* hinder: and besides it is unnatural to that part; nor to the Liver, because there is but one little Artery implanted in the Liver: nor to the Spleen, because the *Splenetick Arteries* supply that with Vital Blood; nor to the *Cœliac*, because nothing ascends by the Arteries, but all descends by them to other parts. § 11. III. *Mesenterica Inferior* is dissected into the lower part of the Mesentery, and the left side of the *Colon*. § 12. IV. *Emulgens*,

carries Blood to the Kidneys. § 13. V. *Spermatica*, is dissected with Capillary branches to the Testicles. § 14. VI. *Lumbares*; from these two Arteries arise, which are thought to accompany two Veins to the Brain. § 15. VII. *Muscula superior*, which serves the Muscles of the *Abdomen*.

VI. Of the Iliac Arteries.

§ 1. Afterwards the *Arteria Magna* or *Aorta*, begins the beginning of the *Os Sacrum*, where it goes above the *Vena Cava*, and no longer under, least by reason of its continual motion, it should be hurt against some Bone; and here it is called *Arteria Iliaca*.

§ 2. It is divided like the *Vena Cava* into two *Iliac Trunks*: and each Trunk into an inner and lesser branch: and into an outward and greater, which go to the Thigh. § 3. These Trunks send out on each side six branches.

I. The *Sacra*, immediately after the Bipartition. II. *Musculainferior*. III. *Hypogastrica*. IV. *Umbilicalis*, which last three come from the inner Trunk. V. *Epigastrica*. VI. *Pudenda*, which two last come from the exterior Trunk.

VII. Of the Crural Arteries.

§ 1. The rest of the Artery (out of the Abdomen) being carried to the Thigh, changes its name, and there makes the *Crural Arteries*; from whence on each side spring branches above the Ham, and branches under the Ham. § 2. Above the Ham, from the outward part of the Trunk. I. *Muscula Cruralis externa*, to the foremost Muscles of the Thighs: from the

the inner, II. *Muscula Cruralis interna*, which go to the inner Muscles of the Thigh; and this is mixed at the Knee with a little twig of the *Hypogastrica*. § 3. Under the Ham arises I. *Popliteus*, which goes to the hinder Muscle of the Thigh. II. *Sura-*

lis, which is divided into I. *Tibialis Exterior*. 2. *Posterior alius*. 3. *Posterior humilis*, for the Muscles of the Legg. III. The last of them is sent to the Foot and Toes, all along accompanied with the Veins, from whom they borrow their Names.

CHAP. V. Of NERVES.

1. OF the Nerves in general:

§ 1. *Neūgen, Nervus*, a Sinew, is a similar, spermatick, membranous, long, round, and white, hollow part; a common Organ, serving to carry the Animal spirits, into all parts of the Body, for sense and motion. § 2. Its efficient cause is the *Vis Nervifica*, the Nerve making power or faculty: Its matter is a cold and clammy part of the Seed: Their Original dispensation is from the *Medulla Oblongata*, partly as it is within the Skull: and partly, as it is in the Back-Bone: though *Galen* and others thought that they arose from the Brain and Spinal Marrow, who may be refuted by Ocular inspection. § 3. Their end and use is, to carry the Animal Faculty with the Animal Spirits from the Brain, for the sense and motion of the whole Body. And therefore the Nerves inserted into the parts; do give to the said parts either sense alone, or both sense and motion, there being neither without help of a Nerve, for a Nerve being cut, the sense and motion of the part is lost. § 4.

But this sense or motion is according to the parts where they are disseminated, because the Nerves of themselves are neither sensitive or motive: if they are inserted into Muscles, (the Organs of motion) they are termed *Nervi motorij*. motive Nerves: if into the Instrument of Sense, *Nervi Sentientes*, The Sensitive. § 5. Their Situation is for securities sake) deeper than that of an Artery: their Magnitude is various, according to the nature of the Organ, and dignity of the Action. Those of the Eyes are great, because of the Action: those of the Limbs, very great and thick, because of their distance and magnitude; those of the sensorio parts are in a middle proportion; those of the nearest parts, as in the Muscles of the Face, are the smallest of all. § 6. The number of the Nerves are taken from their Conjugations or pairs, which are forty, according to *Birtheoline*: ten pair from the *Medulla oblongata* within the Skull; and thirty pair from the same *Medulla* in the *spina dorsalis* or Back-bone. The Ancients made

made but seven pair within the Skull: *Archangelus* and *Barber*, accounted eight pair; *Columbus* nine; and *Bartholine* ten pair, as we shall hereafter shew. The thirty pair from the Marrow of the Back are divided into seven pair proceeding from the *Vertebrae* of the Neck: twelve pair from the *Vertebrae* of the Thorax: five from the *Vertebrae* of the Loyns; and six pair from the *Os sacrum*. § 7. They are called pairs or Conjugations, *συνζυγίας Nervorum*, from their coupling or being double, for that they sprout out on both sides, except the last or lowest proceeding from the Spinal Marrow. § 8. The form or figure of the Nerve is long, round, and smooth like Conduit Pipes: solid to appearance, having no such hollowness as the Veins and Arteries have: But they have Cavities or Pores, for the carrying of the Animal Spirits, though not perceptible by the bare Eyes, excepting the Optick Nerves, whose hollowness *Bartholine* saith, That he did shew publickly. § 9. The substance of all the Nerves, (none excepted) is composed of many nervous Fibres, which grow mutually together by little Membranes; and this substance is thought to be threefold; 1. The internal white and marrowish, from the Marrow of the Brain, but more compact and thickned: 2. an inner Coat, from the *Pia mater*: 3. an outward Coat from the *Dura Mater*: but these things sense cannot discover. § 10. The substance of the Nerves are also either harder or softer: The

harder are such as either go a great way, or through some hard Body, or by a crooked way, or are ordained for motion, which requires strength; and all parts which have voluntary motion, have hard Nerves, for that which is hard is fitted to Act, that which is soft to suffer: The softer Nerves, are such as are the shortest, and which belong to the Organs of the Senses, as the seeing, tasting, hearing and smelling, which last are the softest of all; and these require soft Nerves, as being the objects of Suffering. § 11. As their use is to carry the Animal Spirits and Faculties into all parts for sense and motion; so if they be obstructed in their Original, or beginning, or totally; they both perish, and an Apoplexy is caused: if the Obstruction be but in part, then one part is deprived of sense and motion: if they are cut a sunder, the motion of the part into which they are inserted is lost: Moreover the Nerves diffuse Animal Light into the parts, by which they are directed in their operations. § 12. Hence it appears how necessary it is for a Physician to know the Nerves, their Original, Differences, and Distribution, that he may understand to what part of the *Spina dors*i Topick Medicaments are to be applied, when sense or motion are hurt in the Face, Neck, Arms, Hands, Muscles of the Belly, Womb, Bladder, Anus, Yard, Thighs, Leggs or Feet. § 13. Moreover the cause of the Gout seems chiefly to be the extravasating of the Nervous juyce: for the Ner-

Nervous juyce being over-heat, or rarified by too much heat, cannot be contained in its proper place, but seeking more room flies out of the solid capacity of the Nerve (its proper domicile) into the hollow of the Nerve, the Channel of the Animal Spirits, thereby interfering with them, causing an extension of the Nerve, opposition, and consequently pain.

II. *Of the ten pair of Nerves arising within the Skull, from the Medulla Oblongata.*

§ 1. *The first pair is par Olfactorium, the smelling pair,* which adhere to the Mammillary or Teatlike processes: these Nerves issue out of the Marrow about the Saddle of the *Sphenoides*, near the foremore Ventricles, having the nature, form, colour, and use of Nerves, yet they pass not out of the Skull and *Dura mater*. The processes are in number two, white, soft, broad and longish; in Men thin and small, in Beasts greater, especially Dogs and other things which have an exquisite smell: the use of these processes, is to be the true Organs of smelling, and not the Nose nor its Coat; they are placed in the forepart of the Brain, behind the *Osculatorium* (through which all smells ascend) and to it being covered with the *Dura Meninx*, they put a Face.

§ 2. *The second pair, is the Optick or seeing pair, because it carries the Visive spirits to the Eyes, or the representation of visible species to the Brain.* These with the Ancients and some Moderns are but the first pair. They are the big-

gest and thickest of all the ten pair, but softer than the rest: they arise from the hinder part of the Head, are carried between the Brain and beginning of the Spinal Marrow, and appear out of the Original of the first Trunks of the *Medulla Oblongata* growing out of the Brain, and are turned round about those great eminencies of the Brain, which *Galen* calls *Thalamus Nervorum Opticorum*, which reach to the foremore Ventricles, that they may fetch optick Spirits from thence. The two Nerves proceeding a while, are about the middle way united, above the saddle of the *Oss Sphenoides*, not by a touching, but an absolute mixing and confusion of their substances, least the visible Species being received by both Eyes, should seem double; and likewise that the Visive Spirits might (if need be) be all conveyed into one Eye: presently after being separated, they go out of the Skull into the Center of the Eyes: within the Skull they are clothed only with the *Pia Mater*: but from the holes which pass to the Eyes, they are covered with the *Dura Mater*, which last covering they spread to the *Tunica Sclerotica*: Their former covering to the *Tunica Choroides*, and their inward substance to the *Retina*. § 3. *The third pair is the Motorium Oculorum, the Eye-mover, and it is next to the former.* This with the Ancients was the second pair. This pair reaching to the middle of the Head, goes beneath the Optick Nerves Cross-wise, and

and arises at the inward part of the *Medulla Oblongata*; where in their Rise, the two Nerves are so united as to touch one another, and become one continued Body; whence it is, That if one Eye is moved, so also is the other. This pair is lesser and harder than the Optick Nerves, is stretched out by the visive pair, and goes out of the Skull at other holes to the Muscles of the Eyes and Eye-Lids.

§ 4. *The fourth pair, (which with the Ancients is the third pair) follows in the order of the other pairs, and springs with a very small Nerve, from the lowest and hinder Seat of the Medulla Cerebri, is carried forwards, and fastned at the second pair, goes with it out at the common hole enters the Socket of the Eye, and sends out from it self four branches: the first into the Fat of the Eye, fifth Muscle, and by a peculiar hole of the Forehead Bone, goes out to the Skin of the Forehead and Eye-lid: the second branch goes to the Muscles of the upper Lip, the Lip it self, the Gums, and part of the Nole: the third branch goes by the Cavity of the Nostrils to the Coat of the said Nostrils: the fourth, goes to the inward part of the Temporal Muscles.* § 5. *The fifth pair, which is the Tasting pair, is thought to furnish the Tongue with the sence of Tasting.* This with the Ancients was the thicker root of the third pair. It springs near the following *Conjugation*, out of the sides of the *Medulla Oblongata*, passes through the *O. Sphenoides*, and immediately af-

ter sends out a twisted branch, much like the tendril of a Vine, which is united with too little twigs to the Auditory Nerve. It disperses it self to the Muscles of the Face, the Temporal Muscles, the Chewing Muscles of the Cheeks, the Skin of the Face, the Gums, and roots of the Teeth, by whose means, the Teeth have all the Sense they have; as also to the Muscle hidden in the Mouth and lower Lip. § 6. *The sixth pair (which is also a Tasting pair) has a smaller beginning next to the former, and somewhat harder than it.* This with the Ancients was the four pair or *Conjugation*. It goes through a common hole with the former, (and yet is not therefore one pair, with the former) for the third, fourth, and seven pairs, as we reckon them, do all pass through one and the same *Foramen* or hole.) It is carried to the Pallet, and helps to give it the Sence of Tasting. § 7. *The seventh pair, is a peculiar smaller pair, and harder than the fifth pair, and also distinct therefrom in its Original and Progress.* This formerly was accounted a part of the fifth pair. It arises a little before the eighth pair, in the midst of the *Medulla Oblongata*, and going over the third pair, and cutting the same, it runs along between the third and fourth pair, where it is carried upwards and forwards towards the sides. It goes out of the whole with the third and fourth pair, and is commonly spent upon the *Musculus abducens* of the Eye. § 8. *The eighth pair, which is called Auditorium,*

ditorium, the hearing pair. This with the Ancients was their fifth pair. It arises close by the sides of the former, only a little lower, enters the *Os petrosum*, and is divided into the greater Branch, which being spread out some will have to make the *Drum* of the Ear; and into a lesser branch, broad below as if it would go along with the sixth Conjugation: it sends branches through the first and second Vertebra, to the proper Muscles of the Larynx, whence, if the Ears are picked too deep, it causes Coughing. Some think, that it also sometimes sends Nerves to the Arm; and sometimes to the whole foot, with the Nerves of the *Spina dors.* § 9. The Ninth pair which is called *ParVagum*, the roaming or wandring pair. This of old was accounted but the sixth pair. It arises a little beneath the former, being invested with strong Membranes, and runs through the hole of the *Occiput*, (through which the *Ramus Major jugularis internæ* had ascended) to the Throat, from whence it sends branches to the Muscles of the Neck, especially the *Cucularis*. Then the Trunk descending is knit to the eighth pair, the *Carotick Arterie* and *Inguilar Vein*, and sends branches cross-wise through the Membranes and Muscles of the Larynx, the Muscles of the Tongue, of the *Os Hyoides* and the *Fauces*. Now descending between the *Carotis* and *Jugularis*, to the side of the Wind-pipe, it is divided on each side, into an External and Inter-

nal branch. § 10. The External branches having sent some branches to the Muscles of the Breast, constitute the recurrent Nerves, right and left serving for the Voice, for if they be wounded or cut asunder the Voice is lost; if one be cut asunder, half the voice is lost; if both; the Creature becomes Dumb. They contribute and send branches to the *Pleura*, the Coat of the Lungs, the *Pericardium*, the Heart, and the upper Orifice of the Stomach, making the *Stomachicus dexter & sinister*, where the two branches become united, and passing under the Gullet, (the right to the left side, and the left to the right side,) through the *Septum*, and encompassing the orifice of the Stomach, the right branch goes into the right Ventricle of the Stomach; the left to the *Pylorus* and the hollow of the Liver. § 11. The Internal Branches, first of all give branches at the roots of the Ribs to every Intercoastal Nerve, and then with the great Artery, they pass through the *Septum Diaphragma*, and furnish the whole Belly, as far as the *Os Sacrum*; where they are divided into three branches: the I. goes into the *Omentum*, where goes three twigs, the first to the Colon, hence after a long Cholic comes hoarseness: the second to the beginning of the Guts: the third to the right side of the bottom of the Stomach, the upper Membrane of the *Omentum*, the Gall-bladder, and the runicle of the Liver, (but the *Sinister internal branch* goes to the Spleen.) The II. being inferior

rior goes to the right Kidney : (hence the Cause of Vomiting, in fits of the Stone in the Reins.) The III. which is the greatest, to the Mesentery, Guts, and right side of the Bladder. Sometimes also both the Internal branches send twigs to the Womb.

§ 12. *The Tenth pair, which are the last pair of Nerves within the Skull; they arise within the hinder part of the Head, out of the Medulla Oblongata, just as it is ready to fall into the Back-bone. These the Ancient Anatomists accounted the seventh pair. It is harder than the rest, springs from diverse roots, afterwards united, and runs out of the Skull at a crooked hole, singular to this pair; then it is with strong Membranes joyned (not mixed) with the Ninth pair; afterwards separating again, it runs, (the greatest part of it) to the Tongue, and some small part of it to the Muscle of the Larynx and Os hyoides.*

III. *Of the Nerves springing from the spinal marrow; and first of the Nerves from the Neck.*

§ 1. *The Medulla now passing out of the Skull into the Back-bone, is called Medulla Spinalis or dorsalis, the marrow of the Back-bone, from out of the holes whereof proceed little Nerves, to the number of thirty pair; of which seven belongs to the Vertebrae of the Neck; twelve to the Vertebrae of the Brest; five to the Vertebrae of the Loyns; and six pair to the Os sacrum.* § 2. *The Nerves of the Neck are disseminated into the whole outward Head, its Muscles, and some part of the Arm.*

§ 3. *The first pair comes not out of the sides, but from the fore and hinder part of the first Vertebra, (because of its particular Articulation) viz. between the hinder part of the Head, and the first Vertebra, and is bestowed upon the Muscles which bend the Neck, and lye under the Oesophagus: in the hinder part it comes out of the space common to the first Vertebra and the Occiput. It has two twigs, the lesser is bestowed upon those which stretch out the Neck: the greater is inserted into the beginning of the Muscle which lifteth up the Shoulder-blade.* § 4. *The second pair, like the former, comes not out of the sides, but in the fore-part, where it is smallest, it comes out between the first and second Vertebra, and is bestowed upon the skin of the Face. In the hinder part, it comes out of the sides of the process of the second Vertebra, but is immediately parted into two twigs. The thicker is bestowed upon the whole skin of the Head, even to the Crown; the smaller is bestowed upon the greater Streight, and lower Oblique Muscles which stretch out the Head.* § 5. *The third pair comes out of the Lateral hole, which is between the second and third Vertebra, and is presently divided into two branches; that which is in the fore part has four twigs: the first goes to the long Muscle: the second to the Muscles which lye under the Oesophagus: the third to the skin of the back part of the Head: the fourth to the transverse Muscles of the Neck, and the Muscle which lifts up*

the

the *Scapula* or Shoulder-blade. That which is in the hinder part, is bestowed upon the second pair which lifts up the Brest. § 6. The fourth pair comes out of the hole common to the third and fourth *Vertebrae*, and has two branches. The foremost has three twigs: The first goes to the Muscles bending the Neck: the second to the transverse Muscle of the Neck, and *Cucularis* of the shoulder-blade: the third goes to the nervous part of the Midriff. The hindermost branch goes to the Back-bone, under the Muscles of that part, upon which it bestows twigs. § 7. The fifth pair comes out between the fourth and fifth *Vertebrae*, and has two branches: the foremost has four twigs. The first goes to the Muscles bending the Neck: the second goes to make the *Nervus phrenicus*: the third to the *Deltoides*: the fourth to the *Deltoides Coracohyoideus*. The hindermost branch goes to the *Spina*, and is bestowed upon the Muscles there. § 8. The sixth pair comes out between the fifth and sixth *Vertebrae*, and has as the rest two branches. The foremost branch, sends first one twig to make the *Nervus phrenicus*; then it goes to the Arms and hollow of the shoulder-blades. The hindermost branch, goes to the Muscles behind, which stretch out the Neck and Head. § 9. The seventh pair comes out between the sixth and seventh *Vertebrae*: the foremost and largest branch is carried to the Arm. The hindermost and smallest to the Muscles of the Neck, and quadrate Mus-

cle which pulleth down the Cheeks. § 10. Lastly, here is to be noted; first, that the branches of the fourth, fifth and sixth pairs do make the remarkable Midriff Nerves: Secondly, that there are carried into the Arm five or six pair of Nerves; viz. from the fifth, sixth and seventh pairs aforegoing, and from the first and second pair of the Brest.

IV. Of the twelve pair proceeding from the *Vertebrae* of the Brest.

§ 1. These all of them after their egress from the *Spina*, are divided into two branches: I. a foremost which is the greater: II. a hindermost, which is the lesser. § 2. The foremost and greater branches, are sent into all the *Intercostal spaces*, the internal and external ones, to the Muscles which lye upon the Brest; as also to the oblique descendent Muscle of the Belly. § 3. The hindermost and lesser branches go backwards, being bowed back, to the *Spina* of the Back, between the Muscles which grow to the *Vertebrae*, in which they partly terminate, and partly in those which grow (from those points of the *Spinae*) into *Rhomboides*, *Cuculares*, &c. § 4. The first pair springs out of the hole between the seventh *Vertebra* of the Neck, and first of the Brest. The foremost branch goes upwards towards the *Sternum* and sends a twig to the *Musculus Subclavius*, and those that arise from the *Sternum*, and hollowness of the Shoulder-blade. The hindermost branch lyes under the Muscles

Tab. III.

The Spinal Nerves Explicated.

- A. Beginning of the Spinal Marrow. (Medulla.
 bbbb. Boughs springing from the
 ccc. The body it self of the Marrow.
 DDdd. Branches from 3 pair of the Neck and two of the Brest.
 E. The Plexure of those Nerves.
 ff. First pair of Nerves of the
 gg. Second pair. (Hands.
 hh. The third pair.
 ii. The fourth pair greater than
 kk. The fifth pair. (the rest.
 ll. Sixth pair, under the Skin.
 m. First Nerve of the Thigh.
 N. Second Nerve.
 ooo. Branch of the second Nerve going with the Saphena.
 PP. Third Nerve of the Thigh.
 QQQ. Fourth Nerve, thickest of all.
 rr. Ramus externus.
 ss. Ramus internus.

Fig. II.

Nerves of the Arm, &c. explicated

- 4.5.6.7. Four Vertebrae of the Neck.
 i. First Vertebra of the Brest.
 a.b.c.d.e. five Nerves from the holes of the Vertebrae.
 xx. The Plexure of the Nerves:
 ff. First pair of Nerves.
 gg. Second pair.
 hh. Third pair.
 ii. Fourth pair.
 kk. Fifth pair.
 ll. Sixth pair, Subcutaneous.

Fig. III. Per Vagum Nervorum, or Nerves of the sixth, (but with us the ninth) Conjugation Explicated.

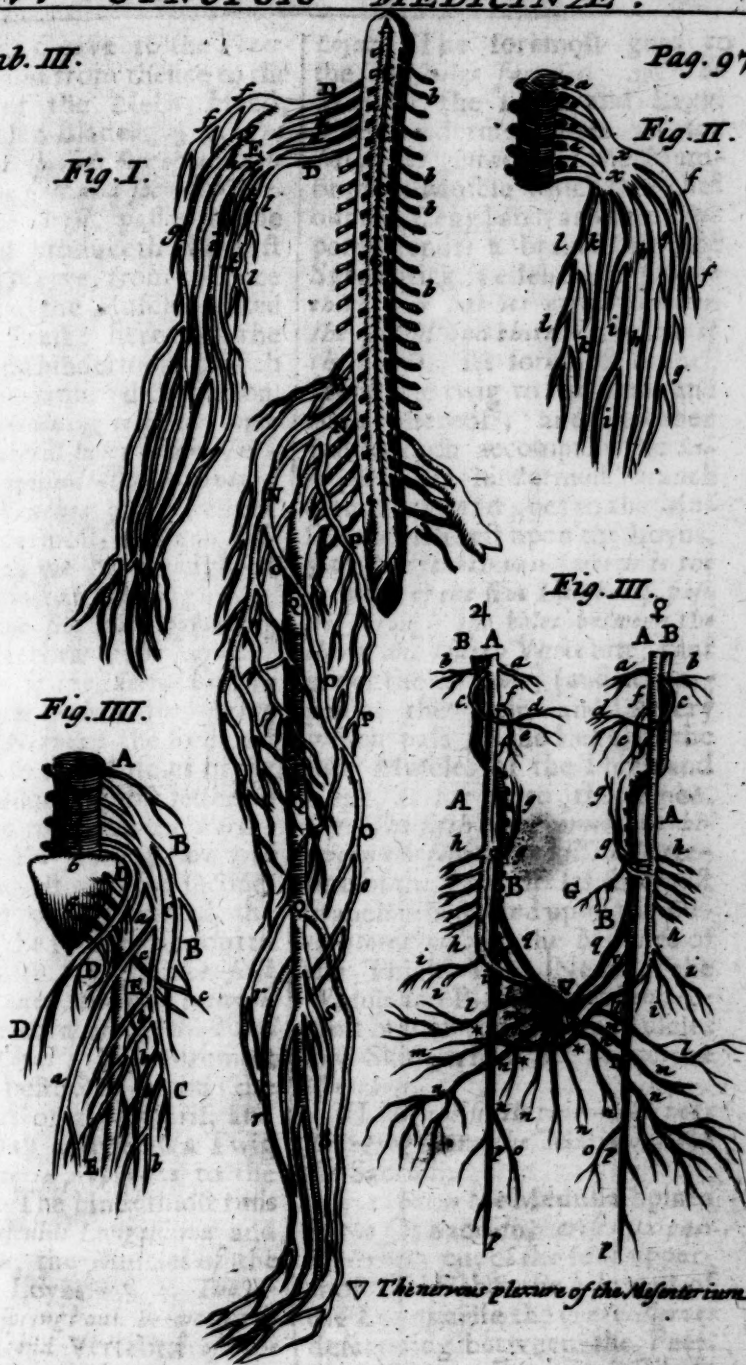
- Y. The right side of the pair:
 Q. The left side of the pair.
 AA. external & greater branch
 BBBB. Internal or costal branch.
 aa. Branches carried to the
 bb. Ramus externus. (Neck.
 cc. Nerve of 10th. pair joyned to the 9th pair.

- dd. A remarkable branch spread into the Muscle of the Os Hyoides. (Tongue.
 ee. Branches spread into the
 ff. Twigs from the external branch going to the Larynx
 gggg. Right and left recurrent Nerves.
 hhhh. Branches going to the Lungs & Aperia Arteria.
 iii. Stomachical branches spread out.
 llll. Branches going to the Caul, Duodenum, Liver, Spleen and Colon.
 mmmmm. Branches going to the right and left Kidney.
 nnnn. Branches going to the Mesentery and Guts. (sacrum.
 oo. Branches going to the Os
 PPPP. Extremities of the internal branches going to the Womb and Bladder.
 qq. rr. Branches from the Internal bough, making the Plexure.
 G. Nerve from the left Recurrent, distributed to the Pericardium and Heart.
 *** Nerve from the left external Stomachical going to the Liver.

Fig. IV.

Crural Nerves Explicated.

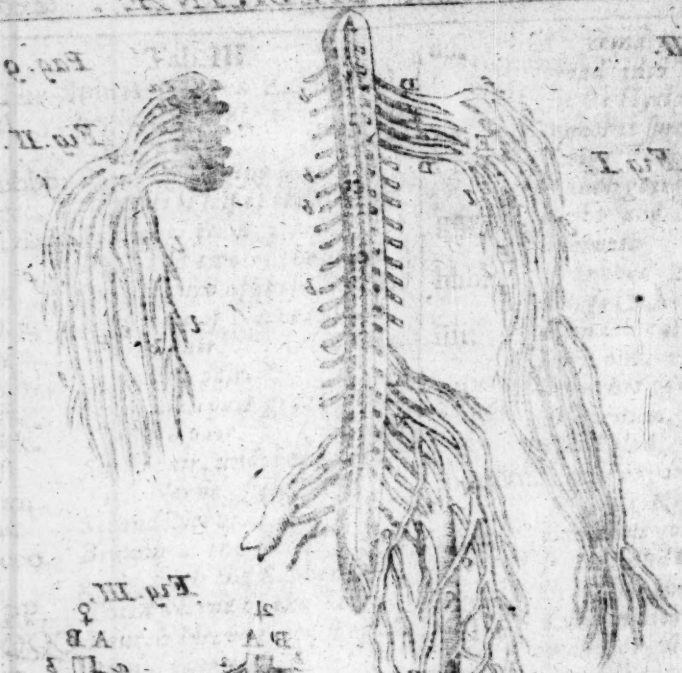
2345. Four Vertebrae of the Loyns.
 66. The Os Sacrum.
 A. Pair of Nerves pertaining to the transverse Muscles of the Abdomen.
 BB. First pair of Nerves of the
 CC Second pair. Foot.
 DD. Third pair.
 EE. Fourth pair.
 aa. Branch of the second pair.
 bb. Another branch of the same.
 c. A branch of the fourth pair going to the Buttocks and skin of the Thigh.



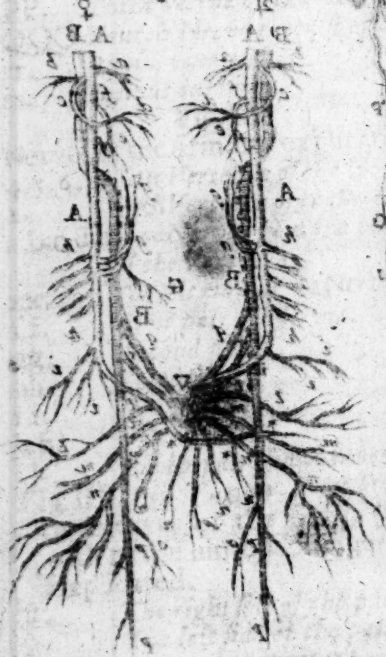
Tab. III.

Fig. I.

Fig. I.



Tab. III.



Tab. III.



△ Anatomical figures of the human body.

cles, which cleave to the *Vertebrae*, and runs from thence to the Muscles of the Neck, Head, and Shoulder-Blade. § 4. The second pair springs out of the hole between the first and second *Vertebrae* of the Brest, passes to the Arms, and produceth the first intercostal Nerve, from whence twigs pass to the Muscles seated upon the Brest: here both the foremost and hindermost branch have the same distribution. § 5. The remaining ten pair, come out of the lateral holes of the *Vertebrae*, and immediately are divided into two branches; a foremost and a hindermost, and are disposed of, as we have taught at § 2. and 3. just aforegoing.

V. Of the five pair springing from the *Vertebrae* of the Loyns.

§ 1. Out of the lateral holes in the *Vertebrae* of the Loyns, spring five pair of Nerves: the foremost greater go to the Muscles of the Belly: the hindermost lesser to those which rest upon the *Vertebrae*. § 2. The foremost are tyed together, the first with the second, the second with the third, the third with the fourth, the fourth with the fifth. § 3. The first pair comes out of the hole between the last *Vertebrae* of the Brest and first of the Loyns: The foremost branch is bestowed upon the fleshy parts of the Midriff, and Muscle *Psoa*: and sends a Twig by the *Arteria preparans* to the Testicles. The hindermost runs to the *Musculus Longissimus* and *Sacrolumbus*, the Muscles of the Belly and Loyns. § 4. The second pair springs out between the first and second *Vertebrae* of the

Loyns. The foremost goes to the *Musculus sacralis*, and the Skin of the Thigh and Legg. The hindermost goes to the *Musculus glutæi*, and the Membratious Muscle, which stretches out the Legg, and, as some suppose, sends a branch to the *Spermatick Vessels*. § 5. The third pair has its egress between the second and third *Vertebrae* of the Loyns. Its foremost branch sends one twig to the Knee and Skin thereof, and another which doth accompany the *Saphæna*. Its hindermost branch turns back, and goes to the Muscles which rest upon the Loyns. § 6. The fourth pair (which is the greatest of the five *Lumbals*) passes through the holes between the third and fourth *Vertebrae*, runs under the *Os pubis*, (and accompanies the Vein and Artery which pass to the Legg) to the fore Muscles of the Thigh and Legg, as far as to the Knee. § 7. The fifth pair, comes out between the fourth and fifth *Vertebrae* of the Loyns. Its foremost branch is bestowed upon the *Obturatorius musculus*, the Muscles of the Thigh, Yard, Neck of the Womb and Bladder. Its hindermost branch runs to the Muscles and Skin, which are above the *Vertebrae*.

VI. Of the sixth pair of Nerves springing from the Marrow of the *Os Sacrum*.

§ 1. From the *Medulla Spinea* in the *Os Sacrum*, arises six pair of Nerves; out of the four uppermost of which, & the 3. lowest of the Loyns, arise the *Crunal Nerves* descending between the Feet.

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These in their Rise are joyned like a Net, but do presently after divide themselves into three Branches, as we shall shew Sect. VIII. following. § 2. The first pair comes out between the last Vertebrae of the Loyns, and the first of the Os Sacrum, and is divided as the former pairs into foremost and hindermost branches. The foremost branch runs to the Muscles of the Abdomen, & to the second which bends the Thigh. The hindermost is bestowed upon the Skin of the Buttocks, and the greatest Glutens. § 3. The other five pair have on each side two pair; and on each side one Nerve goes into the fore-parts, another into the hinder parts: the hindermost branches are disseminated like the hinder Lumbals, to wit, into the hindermost neighbouring parts. § 4. The three uppermost pair, do go into the Thighs and Leggs: The two lower pair to the Muscles of the Fundament and Bladder: as also to the Yard in Men, and to the Neck of the Womb in Women. § 5. But the latter of the two pair (which is produced from the end of the Marrow of the Spina) does sometimes produce but one only Branch out of it self, and therefore is termed *Nervus sine pari*, the Nerve without a Fellow; and sometimes it has a fellow. It spreads it self into the Skin between the Buttocks and Anus, and into certain Muscles of the Thighs.

VII. Of the Axillary Nerves.

§ 1. The Nerves of the Arms springs from the fifth sixth and seventh pairs of the Neck and

the first and second pairs of the Brest, which when they first break forth are all mixed and joyned together: presently after they are severally divided again into six pairs. § 2. Hence in a Palsy, or Convulsion of the Arm, the upper part of the Arm being affected, Topicks must be applied on the side of the upper part of the Back or Neck, from whence those Nerves spring. § 3. These Nerves arising from the Vertebrae, pass by the Muscle called *Scalenus*, and are carried under the *Clavicula* to the Arm-pit, where they are, as aforesaid, mixed or twisted together. § 4. The first pair runs chiefly into the *Deltoides* Muscle, and the Skin of the Arm, leaving a part which accompanies the *Vena humeraria*. § 5. The second being undivided and thicker, goes down to the bending of the Elbow, being covered with fat, and there it furnishes the *Musculus Biceps*, and lyes under the Artery and *Vena Basilica* (though about the Wrist it is above them:) being joyned with the third Nerve, it afterwards goes downwards, and joyns the *Supinator Longior* with a twig. But at the bending of the Cubit or Elbow, it is divided mostly into three Branches: One, which is the upper and lesser, runs along the outside of the Arm, to the exterior part of the first or second Interjuncture of the Thumb: the second, which is the middle, and thicker, descends obliquely within the Cubit to the Wrist: the third, which is the lower, is spread abroad by the inner branch of the *Basilica*, and distributed into the

the skin of the Cubit and hand ; About the Wrist they are divided into ten branches, imparting to every finger two twigs which pass along the sides. § 6. *The third pair is joyned with the former under the Muscle Biceps: and being carried along the Elbow it provides for the Brachæus, and runs by the Wrist to the little Finger, and the inside of the hand.* § 7. *The fourth pair being the thickest runs along with the Vena profunda and the Artery, and is afterwards variously divided: it furnishes the Muscles which extend the Cubit, the Wrist, the Thumb, the fore and middle Fingers, and the Muscles which stretch the Fingers out.* § 8. *The fifth pair runs along by the former between the Muscles of the Cubit, which it supplies, descending through the lower and hinder part of the Cubit; (which when we hurt, or strike it against any thing, compressing thereby the Nerve, it causes a benumbedness in our Fingers :) in the middle thereof, it is divided into two branches. The one goes outwards through the Ulna, to the middle, ring, and little Fingers, on their insides. The other goes inwardly, through the Ulna, between the Finger bending Muscles, as far as the Wrist, and sends branches to the same parts as the former doth.* § 9. *The sixth pair spreads it self into the Skin of the Cubit or Elbow, going between the Skin and the Membrane.*

VIII. Of the Crural Nerves.

§ 1. *The Crural Nerves, or Nerves running into the Thigh and Legg, are in number four; spring-*

ing from the third, fourth, and fifth pairs of the Vertebrae of the Loyns: but the fourth, greatest and largest Nerve, springs from the Complexure of four pair of the Os Sacrum. § 2. *The first and third Nerves are shorter, and reach only to the Thigh: the second is longer, and goes also to the Legg: the fourth is longest and greatest, and sends branches through the whole Thigh, Legg, Foot, and Toes.* § 3. *The first Nerve is made up of the third and fourth pair of the Loyns, descends to the small Trochanter, & spreads it self into the Skin and Muscles of the Thigh, and terminates about the Knee.* § 4. *The second Nerve arises from the same place, descends with a Vein and Artery (through the Groin) to the Thigh and part of the Legg: it runs to the foremost Muscles of the Thigh, and spreads it self about the Knee; sending a remarkable branch inwardly with the Saphæna to the Ankle.* § 5. *The third springs from between the fourth and fifth Vertebrae of the Loyns, passes through the hole of the Os Pubis, to some upper Muscles of Thigh and Yard, arising out of the Os pubis; and spreads it self into the Skin of the Groin and Thigh.* § 6. *The fourth Nerve, (which is the proper Crural Nerve) is the greatest, thickest, longest, hardest and dryest in the whole Body, made up of four pairs of the Os Sacrum; it runs through the Thigh; and furnishes the Skin and certain Muscles thereof; as also the Skin and Muscles of the Legg and Foot.* § 7. *This great Nerve under the*

Ham, is divided into two branches, the one Internal, the other External. § 8. The Internal and greater goes along the Legg, to the Muscles of the Foot and Toes; the inner Ankle, the great Toe, and Sole of the Foot, and bestows two twigs upon each Toe: and indeed all the Nerves which

supply the Legg and Foot, do only arise from the Internal and External branches of the great Crural Nerve. § 9. The External branch goes to the Ham, and spreads it self to the outside of the Foot, to the Musculi peronei, and the outward Ankle.

CHAP. VI. Of MUSCLES.

I. Of a Muscle in general.

§ 1. *Musculus, a Muscle is called in Greek Mūs, a Mouse, from the resemblance it has of a flaid Mouse; it may also be so called from the way of its running and motion. § 2. A Muscle is a similar, spermatick, sanguinous, membranous, fleshy, fibrous part, and the Instrument of Voluntary or free motion. § 3. It is composed of, first Fibres, for the intension of the motion: secondly flesh, for the substance: Thirdly, Tendons, which perform the Action: Fourthly, Arteries by which it is nourished: Fifthly, Veins which carry back the superfluous nourishment: Sixthly, Nerves, which give sense, and convey the motive faculty to the Brain: Seventhly, Membranes, which encompass and keep the Muscles together: Eighthly, Fat, which moistens them, and keeps them from being dried by too much motion. § 4. The Fibres and Flesh are only extended, according to the straight position of the Fibres: the Tendon is in the beginning and end, its end is in that place where the Tendons are greater and more;*

The Arteries and Veins runs through the Substance of the Muscle: The Nerve as soon as it is entred into the Substance, like unto a shrub, it is dispersed into a great number of Twigs, which at last end in it, and become inconspicuous: The Membrane is proper to the Muscle only, and does spring either from the Tendons, or is framed by Nature in the first conformation of the parts: The Fat lies in many void spaces to prevent a Vacuum or emptiness. § 5. A Muscle is also divided into the beginning or Head: the middle or Belly, and the end or Tail. § 6. The beginning of a Muscle Galen calls Ligamentum; But Bartholine (with good reason) saith, It is Tendinous: the middle thereof is fleshy and doth swell, and Bartholine saith, That some few have a Tendon there also, as the Musculus diaphragmaticus, and the second pair of the Os Hyoides: the end of a Muscle the great Tendon thereof. § 7. The Action of a Muscle is voluntary or free motion. § 8. This Action or

motion, is three fold : first, when the Muscle is contracted towards its Head within it self, thereby relaxing the opposite Muscle : secondly, when the Motion is Tonick, so that being contracted it remains so ; these two motions are primary, per se, and not accidental : thirdly, when after contraction) it is relaxed, or restored to its former position, which motion is accidental and proceeds from another : and therefore Muscles are always placed one against another as Antagonists. § 9. The manner of this Action or Motion, does vary according to the variety of Parts, for in the Throat it is Swallowing ; in the Arm bending and stretching forth : in the Anus Expulsion and Retention, &c. § 10. This motion is voluntary or free : for we can hasten or slacken, make or stop this motion, as we please : but there are some singular Muscles, as of the inside of the Ear, the Midriff, the Muscles of the Chest, and of the Eye-lids, whose motion is partly voluntary, partly natural, because they often perform their Actions when we have no thought or will thereto. § 11. Those Muscles which only perform continual or strong motions, which are all such as are appointed for moving the Bones have Tendons : but those which move other parts, as the Tongue, Lips, Forehead, Face, Bladder, Anus, &c. seldom have any : for the Muscles do move themselves only, as those of the Anus and Bladder : or they move with themselves, the Skin also, as in the Lips, Forehead, and Face : Or they move

a Bone, and such, by reason of the strong motion, require Tendons.

§ 12. *The diversity of this motion, comes from the diversity of the Situation : so a straight Muscle has a straight motion ; a transverse, a transverse motion ; an oblique, an oblique motion ; and that which compasses a part, has an orbicular motion, as the Sphincters. § 13. The efficient cause of these Actions or motions, is the Soul of the Creature, inclined thereto by the Appetite or Will : now the Soul uses three Instruments to perform the Action : first the Brain to receive the Charge : secondly the Nerve, to carry it to the Muscle : thirdly the Muscle to perform the Action it self.*

§ 14. *The differences of Muscles are various : first, from their substance ; some are fleshy, as several of the Tongue and Larynx ; some Membranous, as the Constrictores of the Nose ; some partly fleshy, partly nervous, as the temporal Muscles. § 15. Secondly, from their quantity : the greatest of all is the first of those which extend the Breast, for it ascends from the end of the Os Sacrum ; to the first Vertebra of the Thorax : the least of all is the internal Muscle of the Ear ; the rest are of a mean bigness : so also some are long, broad, thick, &c. § 16. Thirdly, from their situation : so some are external, some internal, some oblique, some straight, some transverse. § 17. Fourthly, from their figure or form, or number, as the Muscle Deltoides : the Muscle Bicipites, having two Heads ; also some have two Tails : Moreover some*

are single, some double, the unity of the Membrane and Belly causes the unity of the Muscle; the plurality of Membranes and Bellies, the plurality of the Muscles. § 18. Fifthly, from their beginnings: some proceed from Bones: some from Cartilages, as those of the Larynx: some from Tendons, as the Lumbricales. § 19. Sixthly, from the Action; some move by sympathy, as the *fraterni*, or *Congeneres*; or by antipathy, as the *Antagonistæ*: some move themselves only, as the *Sphincters*, some move other parts: some have only one motion, as most of the Muscles, some have more than one, as the *Missiter* and *Trapezius*: some are *flexores*, some *extensores*, some *rotatores*, some *spinatores*. § 20. As to its being accounted a similar part, it is only said to be so according to Sense or Appearance; and that it is such, it appears, for as much as it forms not of it self alone, the most simple Organical part, as a Finger or Toe, &c. but they take into their composition, with a Muscle, several other similar parts, as Bones, Cartilages, Membranes, Skin, &c. Moreover a truly dissimilar or organical part is only found in its self, not in other parts: But a Muscle, as it is but a part of all dissimilar parts so it goes universally or every where to the Constitution of all Organical parts, which even the most simple Organical parts do not, § 21. *Hitherto of a Muscle in general*, we shall in what follows, endeavour to give you a methodical enumeration and description of all the Muscles in mans Body from Head to Foot.

II. Of the Muscles of the Head.

§ 1. The Muscles of the Head are either proper, from which comes the primary motion upon the first Vertebra, to which it is immediately and closely joyned, being bent forward and backwards, or turned round and they are in number eighteen single, or nine pair: or common which are those, which together with the Head move the Neck, and these are the Muscles of the Neck, of which in their proper place. § 2. The I. pair is called *Splenius* or *Splenicus*, or *Triangularis*, it proceeds from the first Vertebra of the Breast, is spread out on each side upon the Vertebra, reaching to the third Vertebra of the Neck, from whence it is carried to the middle of the Occiput; its use is to draw the Head directly backwards: but if but one of the Muscle act, the motion is Circular to one side. § 3. The II. pair is called *Complexus* or *Trigeminus*, it is a large Muscle assisting the other. It has divers beginnings at the seventh Vertebra of the Neck, and at the first, third, and fourth of the Breast, and is after a different manner terminated in the Occiput. § 4. The III pair is called *sub secundo*, is inserted into the hindermost root of the processus mammillaris: its use is lightly to bring the Head backwards: or backwards to one side, if but one Muscle Act. § 5. The IV pair called *recti majores* are small, fleshy, and lean, and spring from the edge of the second Spondil or Vertebra of the Neck, ending in the middle of the Occiput. § 6. The V pair called *Recti minores*

nores, lye concealed under the former, proceeding from the back part of the first Spondil, or *Vertebra* of the Neck, and is inserted into the *Occiput*; its use is the same with the third and fourth pair. § 7. The VI is called *Obliqui majores*; it lyes beneath, and springs (according to *Vesling*) from the process of the first *Vertebra*, and ends in the *Occiput*, by the out-side of the *Reli*. § 8. The VII pair is called *Obliqui minores*, it arises from the second *Vertebra* of the Neck, is inserted into the transverse process of the first *Vertebra*, and terminates in the *Occiput*. The use of these two *Oblique* pair, is to bring the Head about to the sides. § 9. The VIII pair called *Mastoides*, is placed in the Fore-part. They arise for the most part double, long, and round in the Fore part of the Neck, from the upper part of the *Sternum* or *Breſt-bone*, and middest of the *Clavicula*, and is obliquely inserted into the process called *Apophyſis Mastoides*, or *Mamillary* process which it embraces: its use is to turn the Head. § 10. The IX pair, called *Fallopiani*, lyes under the Throat in the forepart of the Neck, and near the first pair of the Neck: it arises Nervous from the Ligaments of the *Vertebrae* of the Neck, and is inserted into the *Basis* of the Head, which it turns in like manner as the former.

III. Of the Muscles of the Forehead.

§ 1. They have their Original from the upper parts of the Forehead and Skull, near the *Coronal Suture*,

and being spread out upon the Bone thereof, they end at the Eye-brows, that they might lift them up, being severed in the midst of the Forehead, right above the Nose: but knit at the sides to the Temporal Muscles. § 2. These Muscles, *Riolanus* saith, He could not find to be any other than the *Orbiculares*, of which hereafter in Sect. V.

IV. Of the Muscles of the Occiput, or hind part of the Head.

§ 1. These Muscles are rather Membranes, which draw backwards the Skin of the Head, in such persons as have the said Skin moveable. § 2. They are portions of the *Musculus Latus*, or broad Muscle, as also those of the Forehead, which *Sylvius* compares to a riding Hood; for that the *Musculus latus* does cover the Neck, Face, fore, and side parts of the Head.

V. Of the Muscles of the Eye-lids.

§ 1. The two Eye-lids are moved by four Muscles, The I. is the *Frontalis*, which is strait belonging to the upper Eye-lid, to lift up the Brow. It arises at the Internal Cavity of the Eye, and being spread out upon the Muscles, which lifts up the Eye, it reaches unto the Eye-lid. § 2. The II. is the *Musculus Ciliaris primus*, which compasses about each of the Eye-lids. § 3. The III is the *Musculus Ciliaris secundus*; which is drawn out under the Eye-lids, and arising from the Circumference of the *Orbita*, or Socket of the Eye: the use of these *Ciliares* is to shut the Eye-lids. § 4. The IV is *Orbicularis major*: (for there are three *Orbicularis*

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culares, as with this the second and third foregoing :) it is of a Fingers breadth, encompasses the Surface of the Orbita or Socket, and being placed under each Eye-Lid, and reaching as far as the Eye-brow, it closely shuts the Eye-lids, by lifting up the lower, and drawing down the Eye-Brow.

VI. Of the Muscles of the Eyes.

§ 1. The Eye hath six Muscles, of which four are straight, and two oblique or circular: they are all seated within the Cavity of the Skull, and accompany the Optick Nerve. § 2. All their Tendons being joyned together at the Tunica Cornea, under the Adnata, do constitute that Coat, which Columbus calls Tunica innominata, the nameless Coat. § 3. The I. Muscle is called Attollens or Superbus, it is the upper and thicker, and is the lifter up of the Eye, being the Proud or Scornful Muscle. § 4. The II. is called deprimens (the depresser) and Musculus humilis: it is placed opposite to the other, and draws the Eyes downwards towards the Cheeks. § 5. The III. is called Adducens, the drawer to, also Lectorius, the reading Muscle, because it moves the Eye inwards towards the Nose. § 6. The IV. is called Abducens, the drawer from, because it draws the Eye to the outward corner: it is also termed the Indignatorius as being the Muscle of Indignation. All these four Muscles have the same original, progress, and end: the beginning of them all is acute, near the hole where the optick Nerve

enters into the Socket of the Eye, from the Membrane whereof they do arise; their Belly is fleshy and round: and their end is a very small Tendon: by all these four acting together the Eye is kept still or from stirring, which Physicians call motus tonicus. § 7. The two last Muscles, which are oblique, are called Musculi Amatorij, the Lovers Muscles: and Circumactores supernus and Inferius, the rowling Muscle upper and lower. § 8. The V. Muscle, but first of the Amatorij, called Obliquus Externus or Trochlearis (the Pulley-Muscle, because it passes as it were through a Pulley,) also Obliquus major or superior, arises from a common beginning with the first four, is carried right out to the inner corner of the Eye, where it passes out through the Pulley, and ascends in a right Angle to the place where the VI Muscle is inserted, viz. into the upper side of the Cornea: this Muscle is the smallest of all, and has the longest Tendon, by which it wheels the Eye about unto the inner corner. § 9. The VI. Muscle called Obliquus internus, minor, and inferior, is a short, lean, round, and oblique Muscle, seated between the Eyes and Tendons of the second and third Muscle: it springs from the lower and almost outward part of the Orbit of the Eye, and ascending by the outward corner of the Eye, to the upper part of the Eye, is inserted into the Cornea by the Region of the Iris. It whirls about the Eye obliquely downwards to the

the external or outward corner of the Eye. § 19. But before you shew the Muscle of the Eye, cut off the Fat with the Sissars; then shew first the *Obliquus major*: after the *Obliquus minor*: Lastly, the four straight Muscles. However let the *Obliquus major* remain last, when all the rest are taken away, that you may shew its Tendon passing through the Pulley the more plainly.

VII. Of the Muscles of the Ear.

§ 1. The Muscles of the External part of the Ear are four pair; of the Internal part, two pair: but in most people the Ears are immovable, because of the smallness of the Muscles, and little need of their motion. § 2. Of the four first Muscles, three are common with other parts; the fourth is proper to it self. § 3. The I Muscle is called *Deprimens* common to the Ear and each Lip, and is a part of the first Muscle which moves the Cheeks and Skin of the Face, and is called *Quadratus* the Square Muscle, very thin and broad, and is implanted into the Root of the Ear, and pulls it down. § 4. The II Muscle is called *Antrorsum ducens*, or the drawer forwards; it is a part of the Frontal Muscle, which is carried above the Temporal Muscle, and is inserted into the upper part of the Ear. § 5. The III Muscle is called *Retrorsum ducens*, or *Abducens ad posteriora*, the drawer back, arises from a part of the Occipital Muscle, above the *processus Mammillaris*, with a narrow beginning, from whence growing broader, it is carried downwards

transversely, and inserted into the hinder part of the Ear. § 6. The IV Muscle is called *Tripartitus*, or *Attollens* the lifter up; it arises from the *processus Mammillaris*, and being broad it grows narrow by little and little, till at last it ends in a Tendon, and is inserted into the root of the Ear. This is the only proper Muscle to the Ear, and is rather three-fold, because it has three insertions, though all spring confused from one place. § 7. The V Muscle which belongs to the internal part of the Ear, is called *Externus*, it is very small springing from the Skin and Membrane which cover the passage of the Ear, then becoming fleshy, it passeth by a short Tendon to the outward part of the Tympanum, and is inserted about the Center of it: it was found out by *Cassorius*. § 8. The VI Muscle which belongs to the internal part of the Ear, is called *Internus*, it is small, and placed within the *Os petrosum*, with a double Tendon, one of which is fixed to the higher process of the *Malleolus* or Hammer, the other to its Neck. It arises from the Basis of the Wedge-like Bone, then becomes somewhat fleshy, afterwards narrower, and ends as aforesaid, in a double Tendon. Its use is to draw the Head of the Hammer obliquely inward.

VIII. Of the Muscles of the Nose.

§ 1. The Nose has eight Muscles, or four pair, especially in large Nosed people, but they are small, because the motion of the Nose is little. § 2. The I. pair are called from

Dilatantes or *Dilatatores*, *openers* or *widners*, they are fleshy, arise from the Cheek-Bone near the Muscle of the Lips, and sides of the Nose; they are inserted partly into a part of the upper-Lip, partly into the lower Wing, and end in the top of the Nose. *Casseri* saith, That they resemble Myrtle leaves. § 3. The II. pair is called *Erectores*, or *Aperientes*, *openers*: they are mostly Triangular, and with a sharp and fleshy beginning spring from the Suture of the Forehead by the *Foramen Lachrymale*, under the Tear Glandule, and so cleaving to the Bone, are outwardly inserted and carried to the *Pinnae*, Wings, or sides of the Nose. § 4. The III. pair are called *Constringentes*, or *pulling together*: they are little, arise fleshy about the roots of the *Pinnae*, are carried along transversely, and inserted into the Corners of the Wings. The use is a little to shut the Nostrils depressing the *Pinnae*. § 5. The IV. pair are called *Deprimentes*: these are exceeding firm, and Membranous, ly hid under the Coat of the Nostrils in the inner part: They arise from the extremity of the *Os Nasæ*, and are implanted into the *Pinnae* or Wings; their use is to depress the Nose, or pull it downwards.

IX. Of the Muscles of the Lips.

§ 1. The Muscles are common to the Cheeks and Lips or proper only to the Lips. § 2. The Muscle common to both are I. *Zigomaticus*, or *Quadratus detrahens*: it is a thin Muscle like to a Membrane,

interlaced with fleshy Fibres. It arises from the *Vertebrae* of the Neck in the outward side, or Bone *Zygoma*, the *Scapularis*, *Clavicula*, and *Sternum*, and ascending up by the oblique Fibres to the Face is implanted in the Chin, and terminated in the meeting of the two Lips: this pair draws the Lips backwards.

§ 3. II. *Buccinator*, The *Trumpeter* or *Bucco* the Cheek driver or mover; this pair lieth under the former in the upper part of it; and makes up all that part of the Cheek which is blown up when a Trumpet is sounded. It arises from the top of the Gums or Bones near the farthest Grinders, and ends in each Lip. It is wholly Membranous, and interlaced with divers Fibres, and so cloathed with the Membrane which covers the inside of the Mouth, that they can scarcely be separated. § 4. The Muscles proper to the Lips, are either proper to each Lip, or common to both Lips. § 5. The upper Lip has two pair of Muscles proper to it; the lower has but one pair. § 6. The I. pair is *Attolens* or *Sursum trahens*, which draws the Lip upwards: it springs from the corner between the Eyes and the Nose, and is presently inserted into the substance of the upper Lip. § 7. The II. pair called *deorsum movens* proper to the upper Lip, arises from the upper Jaw-Bone, just in the Cavity of the Cheeks under the Socket of the Eye, thin, but broad, fleshy, sunk into store of Fat, is carried downwards right on to the upper Lip. § 8. The III. pair, called *Deor-*

Deorsum trahens, proper to the *lower lip only*, it is also called *Par Mentale*, the *Chin pair*: it arises from the middle of the *Chin*, with a broad beginning, and ascends directly to the middle of the *lower Lip* which it moves upwards. § 9. The Muscle also common or belonging to both Lips are also three pair, I. *Oblique fursum trahens*, that which *Obliquely draws upwards*. It springs outwardly from the *jugal process*, descends obliquely through the *Cheeks*, where it is broad and fleshy, and is terminated in the *Space* between the two Lips. § 10. The II. pair common is *Oblique deorsum trahens*, or *Deprimens*, moving the Lips obliquely downwards: it arises from the *lower Jaw-Bone* to the sides of the *Chin*, fleshy, and with a broad beginning, sometimes stretched out to the middle of the *Chin*, growing by little and little narrower, till it is obliquely inserted into *space* between the two Lips, but somewhat lower. § 11. The III common to both Lips in the *Sphincter Oris*, *Constrictor*, or *Orbicularis*: it is *Circular*, encompassing and constituting the whole *Mouth*, making the proper substance of the Lips: it is spungy, sticking to the ruddy Skin, by help whereof, the *Mouth* is pursed up, or drawn together: now all the Muscles of the Lips, are so mixed with the Skin, and the *Fibres* do so cross one another mutually, that the Skin seems to be a Musculous Skin, or *Skinny Muscle*.

X. Of the Muscles of the Lower Jaw.

§ 1. The Muscles of the lower Jaw, called *Masticatorii*, *Manforij*, *Molares*, *Chewers*, *Eaters*, *Grinders*, are in number twelve, viz. six pair, being six on either side. § 2. I. *Temporalis*, *Crotophites*, the *Temporal Muscle*, so called from its Situation, because it possesses the Cavities of the Temples: it is the greatest of all the Jaw Muscles, being very firm and strong (and stronger in some Beasts; as Swine, Dogs, Wolves, Lyons, &c.) it arises from the whole Cavity of the Temples, with a beginning broad, fleshy, and *Semi-Circular*, which grows narrower by degrees: it runs along under the *Os Zygma*, and is by a very strong and nervous Tendon inserted into the sharp process of the *Jaw-Bone*. A hurt upon *Temporal Muscle* is very dangerous, because three Nerves are inserted into it: two Nerves from the third Conjugation, and one from the fifth; as also because it is covered with the *Pericranium*, (a Membrane thick and hard, blackish and blew, and shining with a delicate colour:) and partly because the Tendon passes through the whole Muscle. If this Muscle therefore is wounded dreadful Symptoms ensue, as Fainting, Swooning, Convulsions, and in conclusion Death. Its use is forcibly to pull up the lower Jaw, and so to shut the Mouth. § 3. II. *Masseter*, *Manforius primus*, *Molitor*, *Mandibularis*, *Lateralis*, the *Chawing Muscle*, or *first Chewer*: it is placed in the *Cheeks*, arises from a double Head; the one of which arises from the *Os Jugal*

le or Zygoma, the other beneath the said Bone. It is inserted into the inferior Jaw-Bone (by a very broad and strong connection) by which it turns this way and that way in Eating; for it is furnished so with Fibres which interferr and cross one another, that they move the Jaw forwards and backwards and side ways. § 4. III. Pterygoides externus, Alare externum, Aliforme externum, *the outward Wing Muscle, found out by Fallopius.* It arises from the Os Sphænoïdes, and the external processus Alaris, with a beginning partly nervous, and partly fleshy, and is inserted into the Neck of the lower Jaw-Bone, and in the inner Seat of the Head thereof. Its use is to move forwards and thrust out. § 5. IV. Pterygoides internus, Masseter internus, Alaris internus, Manforius alter, *the other Chewer it is thick and short, and arises Nervous from the Productions of the Os Sphænoïdes called Alata internæ, and is implanted into the inner and binder part of the Jaw, with a broad and strong Tendon.* Its use is to draw the Jaw upwards and backwards to assist the Temporal Muscle. § 6. V. Graphyoides, Digastricus, Musculus latus, *the double bellied Muscle, or broad Muscle.* It is nervous in the middle, and fleshy at the ends, arising from the Apophysis Styloides; in the middle it is reflexed about the Styloceratoïdes, it is inserted into the Chin, under the bending of the Jaw, and is fastned to a Ligiment, least it should go too far back. Its use

is to draw the Jaw downwards to open the Mouth. § 7. VI. Musculus Latus, *the broad or broadest Muscle (which Bartholine saith, is a part of the Musculus Quadratus.)* It arises from the upper part of the Sternum, the Clavicula, and Acromium or Shoulder-Point, and covering or muffling the whole Neck and Face, it cleaves firmly to the Basis of the inferior Jaw, and is fixed in the middle of the Chin, whose use is to draw the Jaw downwards. The four first Muscles draw the Jaw upwards and are exceeding strong; the last two only draw it downwards, because it would be apt to depress it self.

XI. Of the Muscles of the Os Hyoides or Tongue-bone.

§ 1. This Bone is the Foundation of the Tongue, and therefore its Muscles are common to the Tongue, and Larynx, being in number four pair. § 2. I. Sternohyoides, it arises from the inner but upper part of the Sternum (whence the Name,) and resting upon the Wind-Pipe and Cartilago Scutalis, lyes concealed in the forepart under the Skin, and is inserted into the root of the Os Hyoides. § 3. II. Genio-hyoides, which arises from the inner part of the Chin, fleshy, broad, short, and is inserted into the middle or hollow of the Os hyoides. § 4. III. Stylo-cerato-hyoides: It arises from the root of the processus Styloides, and ends in the point of the Hyoides, being, lean, round, and seated under the Chin. § 5. IV. Ceraco-hyoides: It arises at the first small, lean and long

long, from the upper-side of the *Scapula*, near the *processus Coracoideus* (or Crows-bill-like process of the *Scapula*) becomes fleshy about the Neck, and passing under the *Levator* of the Shoulder-blade called *Musculus Patientia*, it is inserted into the point of the *Hyoides*. This pair is long, and has two Bellies, being extenuated in the middle like a Tendon.

XII. Of the Muscles of the Tongue.

§ 1. The Muscles moving the Tongue are in number five pair, which are proper to it, and do end in its substance. § 2. I. *Styloglossum*, arising from the out-side of the Appendix *Styloides*, and ending with transverse Fibres, in both sides of the Tongue, about the middle thereof: it moves the Tongue inwards; and by reason of the interwoven Fibres, they lift the Tongue upwards, if they act both together: or upwards only on one side, if only one acts. § 3. II. *Myloglossum*, arising from the sides of the lower Jaw, at the roots of the grinding Teeth, and ending under the Basis of the Tongue in the Ligament: when both act, they move the Tongue to the Paler and upper Teeth, but when one acts the Tongue is moved Obliquely upwards. This pair *Riolanus* would have to belong to the *Os hyoides* (because it touches not the Tongue) and calls it *Mylo-hyoides*. § 4. III. *Genio-Glossum*, arising inwardly from the middle of the Chin, and terminates almost in the middle of the Tongue inwardly. *Veslingius* will have this

pair to belong to the *Os hyoides* (because fastned as he saith, To the Basis thereof) and therefore calls it *Genio-hyoides*. Its use is to thrust the Tongue out of the Mouth, and also to draw it again, so that it seems to perform contrary actions. § 5. IV. *Hypoglossum*, or *Basioglossum*, arising fleshy out of the upper and middle region of the *Os hyoides*, runs along according to the length of the Tongue, and is terminated into the middle of it. This pair draws the Tongue right inward, and so to deprels or contract the same. § 6. V. *Ceratoglossum*, which arises from the upper horns of the *Hyoides*, and is obliquely inserted into the sides of the Tongue, near the root thereof: but it may arise from the lower Horns when the higher are wanting. It moves the Tongue directly downwards towards the inward parts; when both act, but to the right or left side, if only one be contracted.

XIII. Of the Muscles of the Larynx or Wind-pipe.

§ 1. The Muscles of the Larynx are either common or proper: the common are two pairs, viz. *Sternothyroides*, or *Branchius*; and *Hyothyroides*. § 2. The proper are in number five pair. 1. *Thyracricoides* or *Cricothyroides Anticus*. 2. *Cricothyroides posticum*. 3. *Cricothyroides laterale*. 4. *Thyrothyroides*. 5. *Arytenoides*. § 3. I. *Sternothyroides* arises from the inner side of the Sternum, runs along by the Larynx or Trachea arteria, and is inserted beneath into the sides of the *Scutiformis*, or shield fashioned

ned Gristle. This straitens the chink of the Larynx, by drawing down the *Scutiformis*. § 4 II. *Hyothyroides*, (the higher common pair) arises from the lower side of the *Os Hyoides*, being broad and fleshy, and touches the *Scutiformis*, and is inserted into its *Basis*. It widens the chink, by lifting up the *Scutiformis*. These common Muscles are implanted into the Larynx, but do not arise therefrom. § 5. Now follow the proper Muscles. I. *Thyrotrichoides*, *Crycothyroides Anticus* arises from the lowest part of the *Scutiformis*, and ends at the *Annularis*; but some say it springs from the fore and exterior part of the ring-like Cartilage, and is inserted into the lateral parts of the *Thyroides*: this widens the Chink of *Scutiformis*. § 6. II. *Cricothyroides lateralis*, *Cricothyrenoides posticum*, *Par Cucullare*, rises from the hinder-side of the *Annularis*, fleshy; and is inserted into the lower part of the *Glottalis* or *Arytenoides*, with a nervous end, opening the Larynx by drawing a sunder the two Gristles called *Arytenoides*. § 7. III. *Crycoarythenoides laterale*, springs above from the side of the *Annularis*, and is implanted at the sides of the *Glottalis*, into the joint, there where it is not touched by the former, and opens the Larynx with the same Oblique motion of the Gristles. § 8. VI. *Thyroarytenoides*, or *Glottoides*; this helps the former, and springing from the inner and forepart of the *Thyroides*, to wit, the *Scutiformis* (and from the *Cricoides* also, as

Riolan thinks) it is terminated into the lateral part or sides of the *Glottalis*, or *Arytenoides*, which shuts the Larynx by a straight passage; if this pair is inflamed in a Quinsy, it is Mortal, because it exactly shuts the Chink. § 9. V. *Arytenoides* is a round Muscle, compassing the ewer-like Cartilage: it arises from the hinder line of the *Glottalis*, and being carried along with transverse Fibres, it is inserted into the sides thereof, shutting the Larynx, while it straitens the *Cartilago Arytenoides*.

XIV. Of the Muscles of the Uvula.

§ 1. It has two pair of Muscles, two on either side, viz. An External and Internal pair. § 2. I. *Ptery-Staphylinus Externus* rises from the upper Jaw, under the last grinding Tooth, ends in a small Tendon, which passes through a Chink on the upper side of the *Pterygoides*, and there being turned back, as it were through a Pulley, it is inserted into the Uvula. § 3. II. *Ptery-staphylinus internus* proceed from the lower part of the internal Wing of the *Pterygoides*, and ascending according to the longitude of the said Wing, it is inserted in like manner, into the Uvula.

XV. Of the Muscles of the Pharynx or Throat, which is the beginning of the Oesophagus or Gullet.

§ 1. The Pharynx has seven Muscles belonging to it, viz. three pair and one without a fellow. § 2. I. *Sphæropharyngæus*, which springs from the sharp point of

of the Sphæroides, near to the process of the Styloides, and passing downwards, is inserted into the lateral parts of the Pharynx, or Throat, to pull up the Mouth of the Stomach, that it may be more wide to receive in meat.

§ 3. II. Cephalopharyngæus, which springs from the part, where the Head is joyned to the Neck, and running down is spread about the Pharynx or Oesophagus, seeming to make the Membrane of it.

§ 4. III. Stylopharyngæus, which springs from the Styloides process, and is inserted into the sides of the Pharynx or Oesophagus, both to dilate and amplify it.

§ 5. IV. Oesophagus. The Muscle without a fellow, being only a Sphincter-like Muscle, encompassing the Gullet. It springs from one side of the Thyroides and circularly encompassing the hinder part of the Pharynx, it is tyed to both the sides of the Thyroides, to contract the mouth of the Stomach, as the Sphincter doth the Anus.

XVI. Of the Muscles of the Neck.

§ 1. The Muscles of the Neck are four pair, to wit, eight Muscles, being four on each side.

§ 2. The two first pair, to wit, Musculus Longus, & Musculus Scalenus, bend the Neck; the two latter pair, viz. Musculus Transversalis, & Musculus Spinatus extend it.

§ 3. I. Longus, lies under the Oesophagus or Gullet, springs from the fifth Vertebra of the Breast, according to Bartholine, (but from the third Vertebra according to Riolan,) with a beginning fleshy and

sharp, ascends laterally, annexed to all the bodies of the Vertebra, terminating in the exuberant process of the first Vertebra, with an acute Tendon, and sometimes is inserted into the Occiput, near its great hole.

§ 4. II. Scalenus, it arises fleshy (at the side of the Neck) from the first Rib, and is inserted inwardly by oblique Fibres, into all the Transverse processes of the Vertebrae of the Neck; through this pair, the Veins and Arteries enter into the Arm.

§ 5. III. Transversalis, arising from the transverse Apophyses, eminencies or processes of the six uppermost Vertebrae of the Breast, and is inserted into all the External transverse eminencies of the Neck.

§ 6. IV. Spinatus, arising from the roots of the seven uppermost Vertebrae of the Breast, and five of the Neck, and is inserted into the spine or point of the second Vertebra of the Neck.

XVII. Of the Muscles of the Breast or Thorax.

§ 1. These are in number sixteen, viz. Eight pair, being eight on either side, of which the first five widen or lift up the Breast: the last three contract it; to these add as a ninth, one peculiar Muscle called Diaphragma or the Midriff.

§ 2. I. Subclavius; it arises from the inner part of the Clavicula, near the Acromion, is of a fleshy substance, and is drawn upwards and outwards and inserted into the upper part of the first Rib, near the Sternum.

§ 3. II. Serratus major, the greater Saw-like Muscle; it reaches from the inner basis of the

the Scapula; unto six and sometimes seven Ribs, of which five are true Ribs, and two bastard Ribs; which it lifts up. § 4. III. Serratus posticus superior, *which lying beneath the Rhomboides, grows out of the sharp points or spines of the 3 lower Vertebrae of the Neck, and the first of the Back, and is inserted into the three upper Ribs, and sometimes into the fourth.* § 5. IV. Musculi intercostales externi, *these are said to be eleven pair in number, but perform but the office of one Muscle: they are as many as there are intervals or spaces between the Ribs, which are in number eleven, so that there are eleven pair of external intercostal Muscles, and eleven on each side. They are interwoven between the Ribs, totally fleshy, and arise from the lower parts of the upper Ribs, and descending obliquely towards the back parts, are inserted into the upper parts of the lower Ribs, terminating on the Cartilages.* § 6. V. Triangularis, *It is small and thin in lean persons, springs out of the inner and lower part of the Sternum, and is inserted into the Cartilages of the lower Ribs, as far as the third or fourth of the Bastard Ribs.* § 7. VI. Sacrolumbus, *which springs from the Os Sacrum, and the Spinous processes of the Loyns; and is inserted into the upper Ribs near their roots, bestowing upon each Rib a double Tendon, one external, the other internal.* § 8. VII. Serratus posticus inferior, *it is opposite to the superior: and both of them by a broad and*

membranous Aponeurosis or Tendon do so grow together, that they serve instead of a band to keep the hinder Muscle of the Back-Bone together: it grows out of the Spines or processes of the three lowest Vertebrae of the Back, and first of the Loyns, and is terminated in three or four of the lower Ribs. § 9. VIII. Musculi Intercostales interni, *these are the same in number and place with the Externi, and lie directly under them; and altho they are eleven pair in number, yet they perform but the office of one Muscle. They are carried Obliquely from the neither Rib; to the uppermore, and have Fibres contrary to those of the External; crosswise intersected.* § 10. IX. Diaphragma or M-driff, *called also Septum transversum, or cross divider: as also Precordia, because it is stretched out before the Heart; and Phrenes, because being affected, the mind and sense are disturbed, by reason of the consent it has with the Brain, so that when the Midriff is inflamed a Paraphrenitis, petty or Bastard Phrensy is caused. It is one in number, an Instrument of free motion, and an admirable kind of Muscle, both in regard of its composition, and continual action or motion, serving also as a Wall of Partition to sever the Vital and Natural parts one from another. The Head of it is in the Nervous Center, but the Tail in the Circumference of the lower short Ribs, from whence it arises, and through which it is obliquely drawn about, as far as to the*

Vertebrae of the Loyns. For from the fourth short Rib to the last, cleaving to the brims of them, it passes by means of double or triple fleshy tendinous productions to the twelfth *Vertebra* of the back, and third *Vertebra* of the Loyns. Its substance is fleshy, in the middle nervous and membranous, where a membranous Center shews it self, and a nervous Circle instead of a Tendon; (whence, *Bartholine*, will not have the Center to be the Head thereof) to which fleshy Fibres do run from the Circumference of the *Thorax*, as to their Center. It has a double Membrane for strength sake, the upper is from the *Pleura*, to which the *Pericardium* is firmly fastned, and sometimes also the Lobes of the Lungs; the lower is from the *Peritoneum*.

XVIII. Of the Muscles of the Back and Loyns.

§ 1. There are four pair which move these parts; (but the Back cannot be properly said to be moved, except the last *Spondil*;) for though Tendons are brought to all the *Vertebrae*, as though there were so many Muscles, yet Anatomists make but four pair, where you must note, That if one only acts, the Back-bone is moved side-ways; if the pair acts, it is either bended or extended.

§ 2. I. The first pair is *Quadratum* adhering to the transverse processes of the *Vertebrae* of the Loyns, arising inwardly from the *Os Ilium* and *Os Sacrum*, broad and fleshy. Its use is to bend the *Vertebrae* of the Loyns. § 3. II. *Lom-*

gissimum, arises with an acute and strong Tendon; (without tendinous, within fleshy,) from the extremity of the *Os Sacrum*, the *Vertebrae* of the Loyns, and the *Os Ilii*, having the same beginning with the *Sacrolumbis*, wherewith it is almost confounded till afterwards it is separated therefrom, by the lowest *Vertebra* of the Back, unto which it gives Tendons like Claps, terminating sometimes in the first *Vertebra* of the Brest, and sometimes at the *Mammillary* processes. § 4. III. *Sacrum*, arises from the *Os Sacrum* behind, being fleshy, and terminates in the twelfth *Vertebra* of the Brest. § 5. IV. *Semispinatum*, which arises where the former ends, and embracing all the Spines of the *Vertebrae* of the Brest, and giving them Tendons, it terminates in the Spine of the first *Vertebra* of the Brest. The uses of these three last are to extend the Brest, Loyns and their *Vertebrae*: If all the eight Muscles act, they hold the back straight, and as it were uphold a Man.

XIX. Of the Muscles of the Abdomen or Belly.

§ 1. The *Musculi Abdominis* do cover the lower Belly, and have their names partly from their situation and rile, and partly from their figure: § 2. They are in number ten, or five pair, being five on either side, whose principal uses are to compel the internal parts, and to move the *Os Sacrum* and *Ilium*: Or to make a proper retention and compression of the parts in the Belly: to

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provoke the avoiding of the Excrements, or help the expulsive faculty of the Womb, Guts, and Bladder. § 3. *Their Temperament is hot and moist, to cherish natural heat and Concoction: They are moderately thick, to defend the parts, and be a safe guard to them; and when very fleshy, they add much to the comeliness of the Body.* § 4. I. *The first pair is Obliquus Descendens, so called by reason of its Fibres which descend obliquely. It rises in the Brest from the lower part of the sixth, seventh, and eighth Ribs (before they end in the Gristles) and from several triangular beginnings or Spires near the Musculus Serratus major of the Thorax, which afterwards grow into one; also it arises from the points of the transverse processes of the Vertebrae of the Loyns, so that its beginning is very large, to wit, from the sixth Rib to the lowest Vertebra of the Loyns, or Os Pubis and Ilium: it terminates in the white line, by a broad Tendon.* § 5. II. *Obliquus Ascendens is situated next the former in a Triangular Figure: rising fleshy from the Rib of the Os Ilii, but membranous from the sharp processes of the Vertebrae of the Loyns (from which it receives Nerves) and from the sharp points of the Os Sacrum: it ascends obliquely, and is joyned to the brims of all the bastard & true Ribs, even to the Sternum, and terminates in a double Tendon embracing the Musculus rectus like a Sheath; but the Duplicity appears only above the Navel, but below it, it is united*

inseparably. § 6. III. *Musculus Rectus, Its original is fleshy, from the Sternum, on each side the Xiphoides Cartilago, or Sword-like Cartilage, and from the Cartilages of the four bastard Ribs: it is extended over the Longitude of the Belly, and is inserted with a nervous end into the Os Pubis. It has three nervous Insertions which strengthen it; and Veins which run along the Longitude of it, viz. the Mammaria descendentes from the Breasts and the Epigastrica Ascendentes from the Womb in Women, but from the Vena Cava in men; which meet about the middle of this Muscle, run as far as the Region of the Navel, and are there terminated. These two Veins are commonly joyned by Anastomosis, from whence Galen thought the consent of the Womb with the Duggs was caused, and which indeed is true; the Duggs also in Women being handled, it excites to Venerary. This pair receives Arteries from the Arteria Epigastrica, and Nerves from the last Vertebra of the Brest.* § 7. IV. *Musculi Pyramidales, the Pyramidal Muscles lye upon the extremities of the Musculi recti, and rise with a fleshy beginning (not very broad) from the external share Bone, where all the Nerves do enter: and growing narrower by degrees, they terminate with a sharp point, in the Tendon of the transverse Muscle. Their office is to compress the Bladder, and therefore they send their Tendons between the Musculi recti, into that part of the Peritonæum which includes the Bladder.*

§ 8. V. Musculi transversi, The cross Muscle arising from the transverse Apophyses of the Vertebrae of the Loyns, and from a certain Ligament which springs out of the Os Sacrum, which covers the Musculus Sacrolumbus: and terminating by a broad membranous Tendon in the Linea alba, sticking extream fast to the Peritoneum every where, except about the Pubis. Its proper use is to compress the Gut Colon.

XX. Of the Muscles of the Os Ilium and Sacrum.

§ 1. These Bones are moved forward in Coition by the Musculi recti & obliqui descendentes of the Belly, the Brest resting and the Thigh remaining unmoved.

§ 2. They are moved backwards by the Musculus sacri, and semispinatus, which arise from the Vertebrae of the Back, &c.

XXI. Of the Muscles of the Penis or Yard.

§ 1. It has two pair of Muscles, to wit, two on each side: the first pair is called Erector, or Director; the latter is called the Accelerator.

§ 2. I. Erector, or penem erigens, is a short and thick pair, arising nervous under the beginning of the Yard, from the innermost bunching out of the Ischium, and being knit unto the Ligament of the Yard, growing fleshy, it reaches side-ways as far as the middle of the Body thereof: their uses are to erect and keep up the Yard in Coition.

§ 3. II. Musculi Acceleratores, or par Urethram dilatans, is longer than the former, but thinner or leaner: they arise both from the Sphincter

of the Anus, and internal Tuberosity of the Ischium or Huckle Bone, are spread out under the Urethra, carried beneath, and inserted into the sides thereof, about its middle. Its use is to dilate or widen the Urethra both in pissing, and for the passage of the Seed in Coition. These are the Muscles where an Appertion is commonly made in cutting for the Stone.

XXII. Of the Muscles of the Clitoris.

§ 1. The Muscles hereof are like those in a mans Yard, the same in number, and to the same intent.

§ 2. The two uppermost being round, rise from the internal knob of the Ischium, and being placed by the lateral Ligaments cause the erection of it.

§ 3. The two lower are broad and smooth, proceed from the Sphincter of the Anus, and are inserted into the brims of the Cunus.

XXIII. Of the Muscles of the Testicles.

§ 1. The Muscles of the Testicles are either proper or common.

§ 2. The proper Muscles are only the pair called Cremaster or Cremasteres, or Suspensores, arising from a strong Ligament in the Os Pubis, where the transverse Muscles of the Belly end, of which they seem to be parts: they pass along through the production of the Peritoneum, which they compass nearly about, and pass with the Spermatick Vessels to the Stones: they are shorter in Women than in Men, and are placed above the production of the Peritoneum: Their use is to sustain or hold up the Stones.

§ 3. The common

Muscle is the Membrane of the Cod called *Dartos*, being a continuation of the fleshy Membrane; and this musculous Membrane suspends both Testicles.

XXIV. Of the Muscles of the Bladder.

§ 1. The Bladder is said to have but one Muscle called *Sphincter*, which doth encompass round the Neck of the Bladder, in an Orbicular form, as also are the Fibres. It is fleshy, drawn back over the *Prostatæ*, thurs the Neck of the Bladder; and by wringing or squeezing the *Prostatæ* or Auxiliary Testicles, it ejaculates the Seed in Coirion. § 2. In Women it reaches to the hole by which the Urine passes, and it seems to form it. § 3. Bartholine has another Muscle called *Musculus expulsiuus*, by which Urine is expelled (though *Rolanus* will have both Offices done by the *Sphincter*;) It is a thick fleshy and musculous membrane encompassing the whole Bladder, and inserted into the beginning of the Bladder; by whose action, (contracting it self) it squeezes the Bladder to help the Voidance of Urine: Its scituation is in the middle between the outward and inward coats of the Bladder, and is commonly called the middle Coat.

XXV. Of the Muscles of the Anus or Fundament.

§ 1. The Muscles of the Anus are either the *Sphincter*, or the *Levatores*. § 2. The *Sphincter Muscle*, called *Ani Constrictor*, or the *Shutter* or *Contractor*, is fleshy, (and without the straight Gut two inches broad;) arise from the lower *Vertebra* of the *Os Sacrum*. And

is encompassed with the transverse Fibres all along the *Anus*: it is fastned on the forepart to the passage of the Bladder by Fibrous couplings, to the *Yard*, to whose Muscles it gives beginning; and to the Neck of the Womb in Women: on the hinder part it is inserted into the *Coccyx* or *Crupper-Bone*: and at the sides, it is fastned (by Ligaments from the *Os Sacrum*) into the *Os Coxæ*. § 3. The *Musculi Levatores* are four, or two pair; one pair of which are broad, and one narrow. § 4. *Musculi Levatores lati*, arise from the *Os Sacrum* and *Os Ilium*, and are inserted into the larger *Sphincter*. § 5. *Musculi levatores tenues*, the narrow Muscles, of which the foremost arises from the transverse Ligament; the hindermost from the *Coccyx*, whereinto they are terminated. § 6. The use of these *Levatores*, is to draw the Fundament upwards, into its own place again; after the Excrements are voided, especially when we have been forced to strain hard at Stool; as, on the contrary, the use of the *Sphincter* is to purse-up the Fundament, that we may go to Stool when we please. § 7. These *Levatores* are placed within the Gut, are large and fleshy, tyed to the sides of the Gut, and right and left sides of the *Anus*, reaching to the *Sphincter*, and possessing the distance between the *Ischium* and *Os Sacrum*.

XXVI. Of the Muscles of the Shoulder-Blade, or Scapula.

§ 1. The *Scapula* has four Muscles according to the number of its motions, viz. forward and backward

ward, upward and downward.

§ 2. I. *Serratus minor, the lesser saw-like Muscle is spread under the Musculus pectoralis, arising from the four upper Ribs (excepting the first) and ascending obliquely upwards, with an end partly fleshy, partly tendinous, and is inserted into the Scapula by the processus Ancoriformis: its use is to draw forwards into the Brest.*

§ 3. II. *Trapezius, Cucularis, arises fleshy from the hinder part of the Head towards the Ear, from whence it descends to the eighth Vertebra of the Brest, and from thence, as also from the Occiput, growing small by degrees, it is inserted into the Back-bone, Scapula, top of the Shoulder, and Clavicula. It moves the Scapula variously, according to its oblique Fibres.* § 4. III. *Rhomboides or Diamond-like Muscle, scituate under the Cucularis, thin and broad, arises from the three lower Vertebrae of the Neck, and the three upper Vertebrae of the Brest, and in the same breadth is inserted into the External Basis of the Scapula: it draws back a little obliquely upwards.* § 5. IV. *Levator, Musculus patientiae, arises from the transverse apophyses of the second, third, and fourth Vertebrae of the Neck, with sundry beginnings (which makes it seem to be divers Muscles;) and is inserted into the higher and lower corners of the Scapula; its use is to lift the Shoulder up.*

XXVII. *Of the Muscles of the Humerus, Brachium, or Arm.*

§ 1. *The Arm is variously moved, therefore has it many Muscles, to wit, nine in number, as Casserius*

has accounted them: for the Arm is lifted up by the *Deltoides* and *supra spinatus*; and downwards by the *Anisculptor* and *Rotundus major*; forwards by the *Pectoralis* and *Perforatus*; backwards by three, viz. the *Infra spinatus*, *supra spinatus*, and *Subscapularis*: and circularly by them all acting one after another.

§ 2. I. *Pectoralis* (for that it takes up the fore part of the Brest) is great and fleshy, arising merely from the whole Brest Bone, and Gristle thereof, the *Sternum*, and above half the *Clavicula*, and is by a sharp Tendon inserted into the Shoulder Bone, between the *Deltoides* and the *Biceps*.

§ 3. II. *Deltoides*, from likeness to the letter Δ, springs from the middle of the *Clavicula*, and the *Acromium*, looking towards the *Scapula*, and is inserted into the middle of the Arm or Shoulder Bone.

§ 4. III. *Latissimus*, springs from the sharp processes of the *Os Sacrum*, of the *Vertebrae* of the Loins, and of nine *Vertebrae* of the Back, and is inserted into a part of the Arm, between the pectoral and round Muscles, with a strong, short and broad Tendon: this with its fellow of the other Arm covers almost the whole Back; it is called *Ani Scalper*, *Claw-breech*, because it draws the Arm backwards and downwards.

§ 5. IV. *Rotundus major* is fleshy, thicker and rounder than the rest, is obliquely seated behind under the *Axilla*, and arises from the lower Rib of the *Scapula*, which ascending a little with its Tendon short, broad, and strong, is inserted (with the Pectoral Mu-

icle) into the middle of the Arm.
 § 6. V. Rotundus minor, musculus transversus brevior, has an oblique situation, is short, round, quite fleshy, and arises with a sharp beginning out of the lowest corner of the Scapula, terminating with an acute end in that Ligament, with which the Head of the Shoulder is involved. § 7. VI. Infra spinatus, super scapularis Inferior, arises in the middle between the lesser round Muscle and the Spina, covers the whole external bunching part of the Scapula (whose form it bears) then becoming more narrow it is inserted into the Neck of the Arm, or Shoulder, which it muffles about. § 8. VII. Supraspinatus, supra scapularis superior, is fleshy, and arises out of the spine of the upper Rib of the Scapula, then being conveyed under the Acromium, it is inserted with a broad and strong Tendon into the Neck of the Arm, at the Ligament of the Joynt. § 9. VIII. Subscapularis or Immerfus, is very fleshy, and passes between the Scapula and Ribs, passing the hollow and inward part of the Omoplatra or Shoulder-Blade, then is carried out and inserted, with a broad Tendon internally into the second Ligament of the humerus. § 10. IX. Coracoides, Coracobrachialis, or Perforatus (found out by Arantius and Placentinus) arises from the processus Coracoides of the Scapula, and is inserted into the inner part of the Shoulder about the middle of the Arm, by the Tendon of the Deltoides. Its beginning is nervous and short; and its Belly has an hole in it (whence its name) to give a pal-

lage to the Nerves running to the Muscles of the Cubit.

XXVIII. Of the Muscles of the Cubit; and first of the Muscles of the Ulna.

I. The Cubit or Elbow has two Bones, the Ulna and Radius: the Ulna serves for flexion and extension; but the Radius for pronation and supination. § 2. The Ulna is bended by two Muscles, the Biceps and Brachieus internus, and extended by four, viz. Longus Brevis, Cubitalis, and Brachieus externus. § 3. The Biceps, (because it has a double and distinct beginning) arises from the Scapula, round and tendinous (in the one beginning) from the Cavity of the Glenoid, or upper lid of the Acetabulum: but broader and less tendinous (in the other beginning) from the Apophysis Coracoides or processus Anconiformis: these are after united and make one Tendon and Muscle, which is inserted into the inner part of the Radius where it bunches out. § 4. II. Brachieus internus is placed beneath the Biceps, less than the former, and all fleshy, arising from the middle of the Os Brachij, unto which it firmly adheres, and is inserted before into the common beginning of the Cubit, to wit, of the Radius and Ulna, in that part where they are fastned together. § 5. III. Longus, or extendens primus, arises from the lower Rib of the shoulder-blade, near the Neck, with a double beginning, and is terminated in the Olecranon or Elbow. § 6. IV. Brevis extendens secundus, springs from the hinder Neck of the Arm, mixed with the fore-

foregoing Muscle; cloaths the *Ossum humeri* or *Brachij*, and terminates on the outside of the *Olecranon* or *Elbow* on which we lean. § 7. V. *Anconeus* extendens tertius, it is situated in the bending of the *Cubitus*, on the hinder side which is called *αγκών* *Ancon*, and answers to the Muscle *popliteus*: it arises out of the lower and hinder part of the *Arm*, between the *Ulna* and *Radius*, and is inserted by a nervous Tendon into the side of the *Cubitus*, about a thumbs length below the *Olecranon*. § 8. VI. *Brachius externus*, being spread out upon the outside of the *Brachium*: it is a fleshy lump, made up of the two former, and is placed under them, being inserted into the same place.

XXIX. Of the Muscles of the Radius.

§ 1. The *Radius* has four Muscles, two of which are *Pronatores* or pullers down; and two *Supinatores* or pullers up: § 2. I. *Pronator superior*, or *Rotundus*, or *Teres*, arises from the inner *Apophysis* of the *Arm*, by a strong and fleshy beginning, and ends with a Membranous Tendon, obliquely running into the middle of the *Radius*. § 3. II. *Pronator inferior*, or *Quadratus*, runs over the *art*, arising from the lower part of the *Cubitus* or *Ulna*, unto the lower part of the *Radius*, and is thereinto inserted; it is wholly fleshy, and every where two fingers broad. § 4. III. *Supinator longior*, or *primus*, arises from the top of the *Brachium*, above the external knob, and being drawn out upon the *Radius*, is

inserted on the inside of the lower *Epiphysis* thereof. § 5. IV. *Supinator Brevior*, or *Alter*, springs from the outward *Apophysis* of the *Arm*, fleshy within, membranous without, and is inserted nearly into the middle of the *Radius*.

XXX. Of the Muscles of the Carpus or Wrist.

§ 1. To the *Wrists* belongs four Muscles, of which the first two (which are internal) bend it: the latter two (which are external) extend it. § 2. I. *Cubiteus internus*, the first bender, arises from the Internal *Apophysis* of the *Arm*, and being stretched over the *Elbow*, is inserted with a thick Tendon, into the fourth bone of the *Wrist*. § 3. II. *Radieus internus*, the second bender, is drawn along the *Radius*, arises from the beginning with the former, and terminates in the first bone of the *Metacarpium*, under the fore-finger. § 4. III. *Radieus externus*, extensor primus, or *Bicornis*, arises with a broad beginning, from the external *Apophysis* of the *Arm*: and then growing more fleshy, is spread out upon the *Radius*, and terminates in a double Tendon, at the first and second bone of the *Ossum metacarpi*. § 5. IV. *Cubiteus externus*, arises from the same beginning, through the length of the *Cubitus*, when it comes to the *Wrist*, it becomes a strong, round Tendon, and is inserted into the upper part of the fourth bone of the *Metacarpus*, under the little finger, not far from the *Wrist*.

XXXI. Of the Muscles of the

Tab. IV.

The Muscles of the fore parts.

- AA. Musculi longi.
 B. Musculus Scalenus.
 C. Musculus Mastoideus, which bends the Head.
 dd. Vertebrae of the Neck.
 E. Scapula Levator.
 FF. The Clavicula.
 GG. The Sternum or Breast-bone.
 H. Acromion or Shoulder tip.
 ii. Musculus subclavius.
 K. The Pectoral Muscle.
 L. The Muscle Deltoides.
 MM. The Muscle Biceps.
 N. Musculus perforatus.
 O. Serratus minor.
 PP. Serratus major.
 qqqq. The Intercostal Muscles.
 KKKR. The Branchiis on each Arm.
 SS. Musculi longi.
 TT. Musculi Radij, pronator rotundus.
 V. Radij pronator quadratus.
 W. Supinator Radij primus.
 X. Carpi flexor externus.
 Y. Musculus Palmaris.
 Z. Carpi flexor internus.
 a. Os Radij.
 b. Os Cubiti.
 A. Ligament fastning the Cubit to the Radius.
 T. Digitorum flexor perforatus.
 O. The profanlus or perforans under the former.
 eeee. Musculi Lumbricales.
 c. Flexor pollicis.
 A. Muscles drawing the Thumb to the

Muscles in the lower part.

- A. Muscle Psoas, or Lumbaris.
 B. Musculus Iliacus.
 C. Obturator internus.
 DDDD. Musculus Triceps.
 EE. Musculus Lividus.
 FF. Musculus Rectus hanging by its end.
 GG. Vastus internus.
 H. Vastus externus hanging.
 II. Musculus Membranofus, fascia lata.
 KK. Musculus Crureus.
 LL. Musculus Longus, fascialis, sartorius.
 MM. Musculus Gracilis.
 NN. Musculus Tibialis anticus.
 O. Musculus Peroneus, Biceps.
 PP. Muscle extending the four Toes.
 Q. Musculus extendens Pollicem.
 R. Musculus Gastrocnemius.
 rrrr. Musculi interossei.
 S. Ligamentum transversum Pedis.
 T. The Tibia.
 V. The Fibula.
 X. The Patella.

Fig. II.

- A. Musculus Deltoides, separated.
 B. Infra scapularis, separated.

- C. Rotundus minor.
 D. Rotundus major.
 E. Musculus pectoralis separatus.
 F. A part of the Musculus latus of the back.
 G. Musculus Biceps.
 H. Lesser Muscle lifting up the Shoulder.
 II. The Brachius under the Biceps.
 K. Musculus palmaris hanging.
 L. A part of the Supinator.
 M. Flexor Carpi externus.
 N. Flexor Carpi internus.
 Q. Flexors of the second Internodium of the four Fingers.
 P. Flexors of the third Internodium of the four Fingers.
 Q. Flexor of the first internodium of the four Fingers. (Thumb).
 R. Flexors of the second internodium of the Thumb.
 S. Abductor of the little Finger.
 aa. Internal face of the Scapula.
 b. Tendon of the Muscle palmaris.
 c. Part of the Tendon of the Muscle R.
 d. Ligament of the Wrist.

Fig. III.

- A. Scapula Levator.
 B. Musculus Brachius whole.
 C. Round pronator of the Radius.
 D. Flexor of the third internodium of the Thumb.
 E. Pronator Radij quadratus.
 F. Flexor of the second internodium of the Thumb.
 aa. Internal side of the Scapula.
 b. Os Humeri.
 c. Os Radij.
 d. Os Ulnæ.
 ee. Ligamentum Memb. ulnæ & Radij.
 ffff. Musculi adductores.
 h. Abductor of the little finger.

Fig. IV.

- A. Part of the Psoas separated.
 B. Musculus Iliacus internus.
 CC. Musculus Triceps a little uncovered.
 D. Musculus Lividus.
 E. Beginning of the Musculus Membranofus.
 F. Musculus Rectus.
 GG. Musculus vastus externus.
 HH. Musculus vastus internus.
 II. Musculus facialis.
 K. Musculus tibialis anticus.
 LL. Musculus Peroneus secundus.
 MM. Extensor tertij internodij of the Toes.
 N. Extensor tertij internodij of the great Toe.
 aa. Appendix of the Os Ilium laid open before.
 b. Extremity of the Os pubis. (out).
 c. Part of the Musculi Gastrocnemius hanging.
 e. Membranous Ligam. of the Tibia and Fibula.
 ffff. Tendons of the Muscle MM.
 g. Ligamentum Transversum pedis separated.

Fig. V.

- A. Internal Face of Os Ilium.
 B. Part of the great Muscle Ginters.
 CCC. Musculus Triceps.
 DD. Part of the Gastrocnemius and soleus.
 EE. Tibialis posticus. (joyned).
 FF. Peroneus primus.
 G. Extensor secundij internodij of the Toes.
 zzzz. Musculi interossei.

Fig. II.



Tab. IV.
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Fig. I.

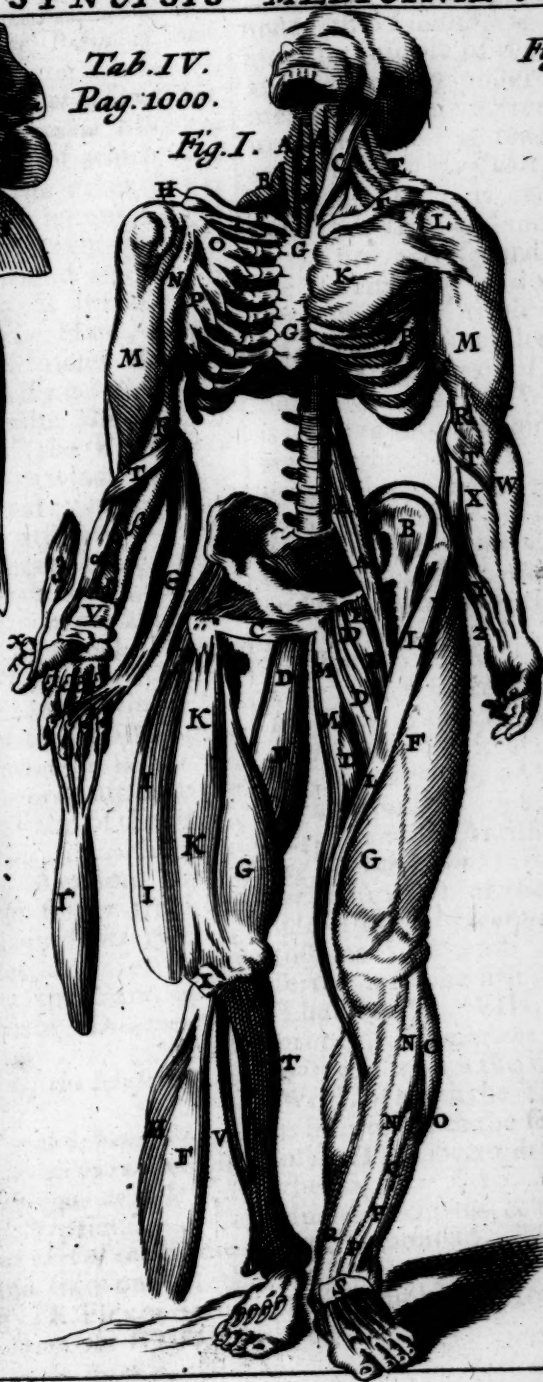


Fig. III.

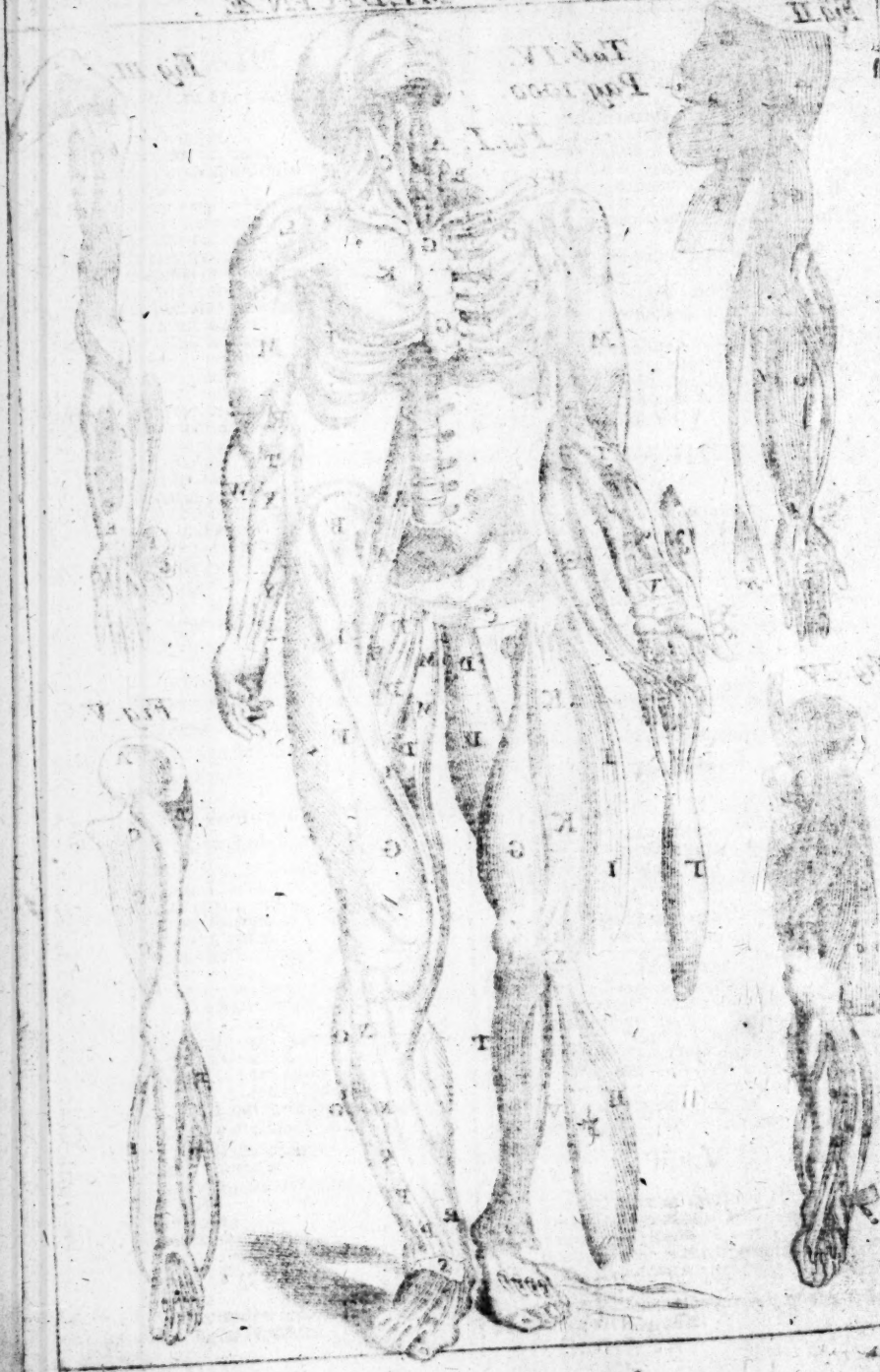


Fig. IV.



Fig. V.





Metacarpium *or Palm of the Hand.*

§ 1. *In the Palm or hollow of the Hand are two notable Muscles, called Palmares, of which the one is long, the other short.*

§ 2. I. *Palmaris longus, arises from the inward Apophysis of the Arm, with a round and tendinous beginning, is spread into the hollow of the Hand, almost over all the Muscles thereof, cleaving exceeding fast to the skin, where under the skin, in the hollow of the Palm, is a broad Tendon, giving exquisite sense to that part; it is terminated into the first intervals between the joynts of the Fingers.*

§ 3. II. *Palmaris Brevis, is Caro quædam quadrata, a certain four-square fleshy substance, springing from the Membrana Carnosa under Mons Luna, where the eighth bone of the Wrist is placed: from thence it is carried under the former Muscle, to the middle of the Palm of the Hand, and is inserted into the outside of that Tendon, which bears the little finger from the rest. This represents two or three Muscles, and serves for the hollowing the Palm of the Hand, to form Diogenes his cup by.*

XXXII. Of the Muscles of the Thumb.

§ 1. *The Thumb is bended by two Muscles; extended by two Muscles; and drawn side-ways by six Muscles.*

§ 2. I. *Flexor primus, arising from the upper part of the Radius, and is inserted into one of the joynts.* § 3. II. *Flexor Secundus, arising from the Wrist-bone,*

under the Thumb, is inserted into the middle of the Thumb, and lyes wholly under the former. § 4. III. *Extensor primus, arising out of the upper and outward side of the Cubit, runs along the Radius, is carried beyond the Wrist, and incerted into the first and second joynt of the Thumb, by a double and somerimes a triple Tendon.*

§ 5. IV. *Extensor alter, arises from the same part of the Cubit, but lower near the Wrist, and is inserted into the third joynt of the Thumb.* § 6. V. *Adducens primus, Hypothenar pollicis, is joyned unto and seated beneath the Thenar, arising out of the three lower bones of the Metacarpium, and is inserted into the second joynt of the Thumb; this draws the Thumb to the four fingers.*

§ 7. VI. *Adducens secundus, The second drawer of the Thumb to the fore-finger; it arises out of the Metacarpium, and is incerted as aforesaid.*

§ 8. VII. *Adducens Tertius, Antithenar, drawing also the Thumb to the fore-finger, arises out of the external side of the Metacarpium, which sustains the Thumb, and is inserted into the first joynt of the Thumb.*

§ 9. VIII. *Abducens primus, or Thenar, the first drawer away arises from the inside of the Wrist, beneath the Thumb, and is inserted into the second joynt of the Thumb, to draw it from the fingers:* § 10. IX. *X Abducens secundus, & tertius, musculi innominati, They arise and are inserted as the former, to draw the Thumb also from the fore-finger.*

XXXIII.

Tab. V.

Muscles of the hinder parts first appearing to the sight.

- aa. Musculi complexi of the
- BB. Musculi splenij. (Head.
- CC. Levatores Scapulae.
- D. Trapezius, or Cucularis out of
- E. Supra spinatus. (its place.
- F. Infra spinatus.
- G. Rotundus major.
- h. Rotundus minor.
- II. Rhomboides.
- KK. Dorsi Latissimus.
- L. Serratus posticus superior.
- M. Serratus posticus inferior.
- NN. Dorsi Longissimus.
- OO. Sacrolumbus.
- P. Quadratus.
- Q. Musculus sacer dorsi.
- R. Musculus longus extending the Arm.
- S. Musculus brevis, the other extender.
- TT. Supinator alter Brachij.
- V. Extensor Carpi primus, called Bicornis.
- W. Extensor Carpi secundus.
- XXX. The 2 extensores Digitorum.
- Z. External Apophysis of the
- Δ. The Deltoides. (Shoulder.
- I. The Brachialis.

The Muscles in the lower part.

- A. Gluteus major out of its place.
- B. Gluteus medius in its place.
- C. Musculus pyramidalis.
- D. Obturator internus, or Marsus.
- EE. The Biceps which bends the Leg.
- FF. The semitendinosus.
- hh. Toe Gracilis.
- II. The Triceps of the left side.
- K. Vastus Extensus.
- ΔΔ. Ticeps of the Right side.
- LL. The Popliteus.
- MM. Toe 2 Gastrocnemij out of their situation.
- NN. Musculus solens.
- O. Musculus plantaris.

Fig. II.

- A. The first supra scapularis reman.
- B. The second supra scapularis. (ved
- C. Rotundus minor.
- D. Rotundus major. (Cubit.
- E. Musculus longus, extending the
- F. Short extender of the Cubit.
- G. Carpi extensor internus.
- H. Carpi extensor externus.
- I. The special abductor of the fore-Finger with one Tendon.
- K. Extensores secundij and tertij internodij of the Fingers united
- L. Extensor tertij internodij of the Thumb.
- M. Extensor primi internodij of the Thumb.
- aa. Spiniformis process of the Scapula.
- æ. Musculus Anconæus. (Spula.
- bb. Bone of the Shoulder.
- c. External knob of the Shoulder.
- d. Internal knob.
- e. Tendons united which extend the second and third internodij.
- ffff. Tendons of the same Muscles applied to the internodij. (loosed.
- g. Annular Ligament of the Wrist

Fig. III.

- A. Gluteus major separated. (on
- B. Gluteus medius in its separation.
- C. Musculus Pyramidalis. (about
- D. 4th Muscle moving the Thigh
- E. Obturator internus entering the
- FF. Musculus gracilis. (fleshy purse
- GG. Musculus Semitendinosus.
- HH. Musculus Semimembranosus.
- II. Musculus Biceps. (towards
- KK. Gastrocnemius turned back
- EL. Musculus soleus in its situation.
- M. Musculus plantaris.
- N. Tendon spread abroad from the heel under the sole of the Foot.
- O. Abductor of the great Toe.
- P. Abductor of the little Toe.
- Q. Interosseal Muscle belonging to the little Toe.
- aa. The brim of the Os Ilium.
- b. The fleshy purse.

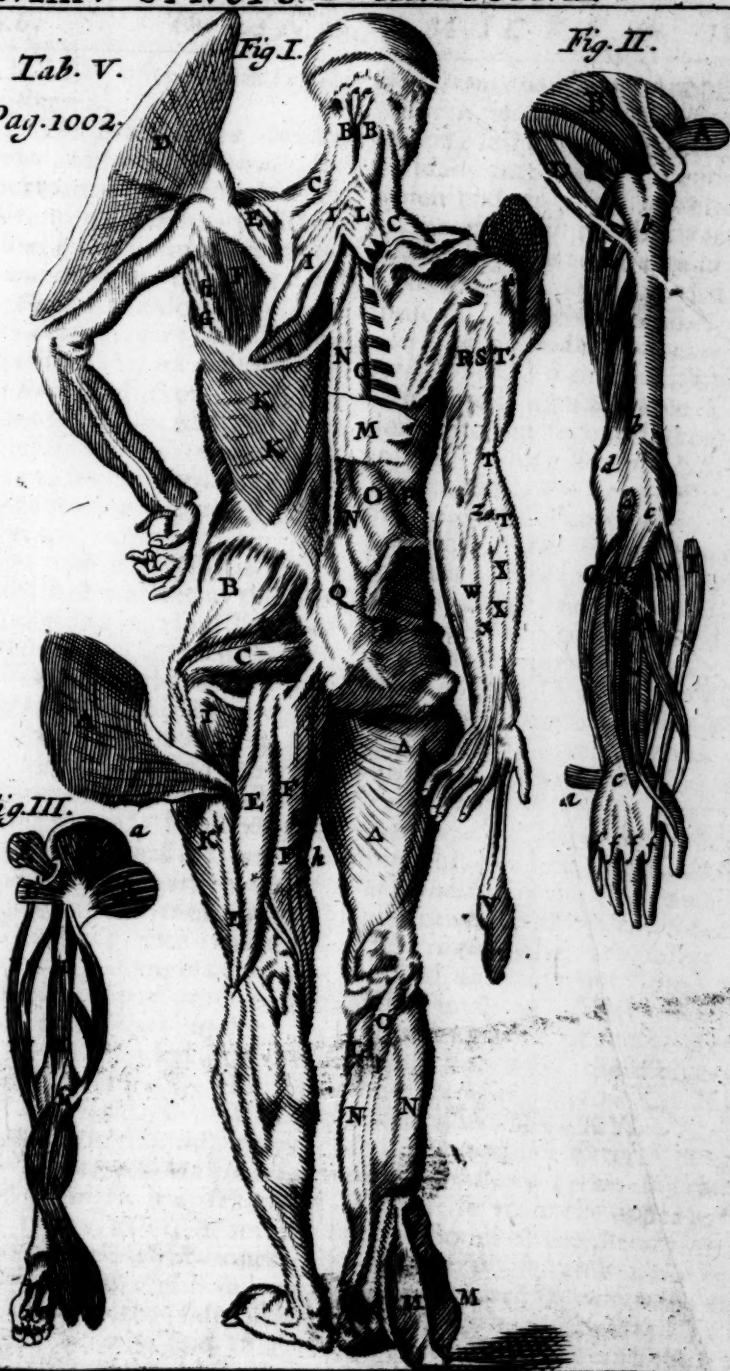
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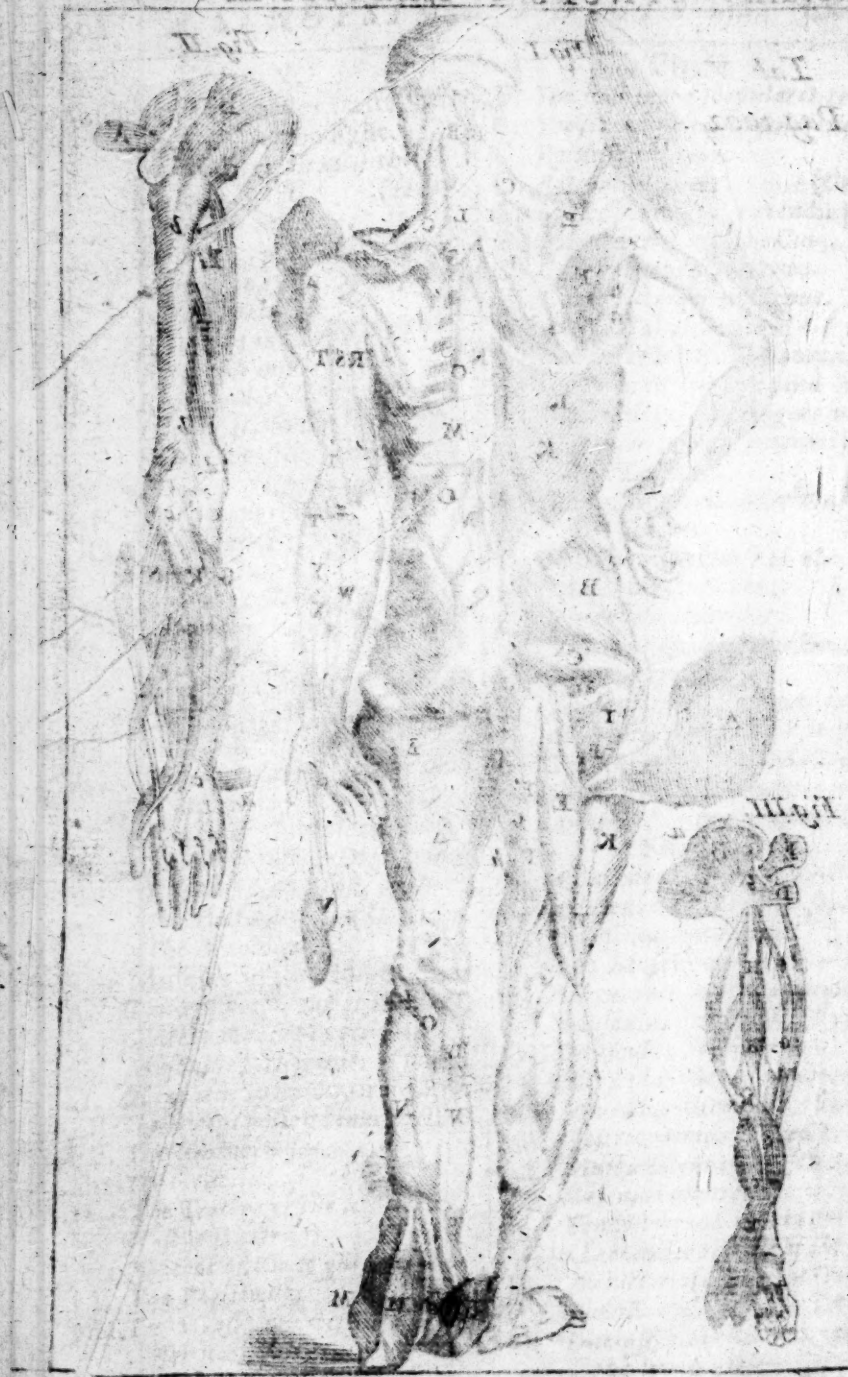
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Fig. I.

Fig. II.

Fig. III.





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XXXIII. Of the Muscles of the other fingers.

§ 1. The Fingers are bended, extended, and moved laterally, for the performance of which there are seventeen Muscles. § 2. Three are Flexors, as *sublimis* & *profundus*, and one proper to the little finger: Three Extensors, one common to all the finger; the other two proper only to the fore and little fingers: Four Adductors, or *Lumbricales*: Seven Abductors, or *Interossei*, of which three are External and three Internal, and one proper to the fore-finger. § 3. I. *Sublimis*, or *perforatus*, it arises from the inner Apophysis of the Arm, before it arrives at the Carpus, is divided into four Tendons inclosed in a Ligament, as it were in a ring, which are inserted into the second jointing of the Fingers, a cleft being first made, through which the Tendons of the following Muscles do pass. § 4. II. *Profundus* or *Perforans*, is spread out under the former, and like unto it, it is inserted through the clefts of the former Tendons, into the third jointings of the fingers; it arises from the upper parts of the Ulna and Radius, under the joint, and is divided into four Tendons, perforating the four clefts, as aforesaid. § 5. III. *Hypothenar digiti minimi*, proprius *auricularis*, the Muscle proper to the little Finger, it arises in the hollow of the hand, from the third and fourth Wrist-bones of the second rank, and is inserted externally into the side of the first joint of the said finger. § 6. IV. *Extensor magnus*, it

arises from the exterior Apophysis of the Arm about the Wrist, and the ring fashioned Ligament; is divided into four Tendons, which end in the lowermost joints of the fingers, but *Bartholine* saith, they terminate in the second and third joints. § 7. V. *Indicator Indicis Extensor*, it arises from the middle and external part of the Cubit or Ulna, and is terminated with a double Tendon, into the second interjointure of the fore-finger. § 8. VI. *Auricularis*, the extensor of the little finger, called also extensor proprius, it arises from the upper part of the Radius, and being carried along with the Ulna and Radius, is externally inserted into the little finger with a double Tendon. § 9. VII. VIII. IX. X. *Lumbricales*, or *Vermiculares*, *Adducens primus*, *secundus*, *tertius*, *quartus*: the 4 Worm-like Muscles, so called from their shape and smallness, they arise from the Tendons of the *Musculus profundus* by the Wrist, and being drawn out along the sides of the Fingers, they are obliquely carried and inserted into the third jointing, (with *Riolanus* the first jointing) of every Finger, where they unite themselves to the *Interossei*. § 10. XI. XII. XIII. XIV. XV. XVI. *Abductores Interossei externi* & *interni*, the drawers from the Thumb; They arise from the upper parts of the Bones of the *Metacarpium* near the Wrist, and in the first internodum or space between the Joints, with a very small Tendon, which jointing with the *Vermiculares*, run along the sides of the

Tab. VI.

Muscles of the hinder parts, the first appearing being removed.

- aa. *Recti minores* of the Head.
 bb. *Recti majores* of the Head.
 cc. *Obliqui superiores*.
 dd. *Obliqui inferiores*.
 e. *Levator Scapulæ*.
 β. *Rotundus minor*.
 δ. *Serratus major*.
 EE. *Musculi transversales* of the
 ffff. *Spinati duo*. (Neck.
 GG. *Sacrolumbus*.
 HH. *Dorsi longissimus* in its place.
 II. The same out of its place.
 K. *Musculus Semispinatus* of the
 Back.
 LL. *Musculus sacer* of the Back.
 MM. *Musculi quadrati* of the Back.
 N. *Supinator Brachij primus*.
 O. *Carpi extensor primus*, or *Bi-*
 P. *Carpi extensor alter* (connis.
 QQ. *Eius extensores digitorum* out
 of their place.
 R. *Indicis Extensor*.
 SS. *Pollicem extendentes duo* Mus-
 culi.

Muscles in the lower parts.

- A. *Glutæus medius* out of its
 place.
 B. *Glutæus minimus* in its place.
 CC. The same out of its place.
 DD. The *Pyriformis* on both sides.
 E. *Marsupialis*, or *Obturator in-*
 ternus.
 F. The same on the left side out of
 its place.
 G. The *Marsupium* neatly expressed.
 HH. *Obturator externus*.
 K. *Quadratus*, the fourth of the
Quadragemini.
 LL. *Biceps*, which bends the Legg.
 MM. *Seminembranosus*.
 NN. *Seminervosus*.
 OO. The *Gracilis*.
 Δ. *Musculus Triceps*.
 Γ. *Crureus*.
 PP. *Tibiens posticus*.

QQ. *Flexor perforans digitorum pe-*
drs.

- R. *Flexor minus seu perforatus*.
 SSS. *Flexor pollicis*.
 t. *Pollicis adductor*.
 u. *Pollicis abductor*.
 x. *Abductor minimi*. (Foot.
 z. *Fleshy mass*, in the sole of the

Fig II.

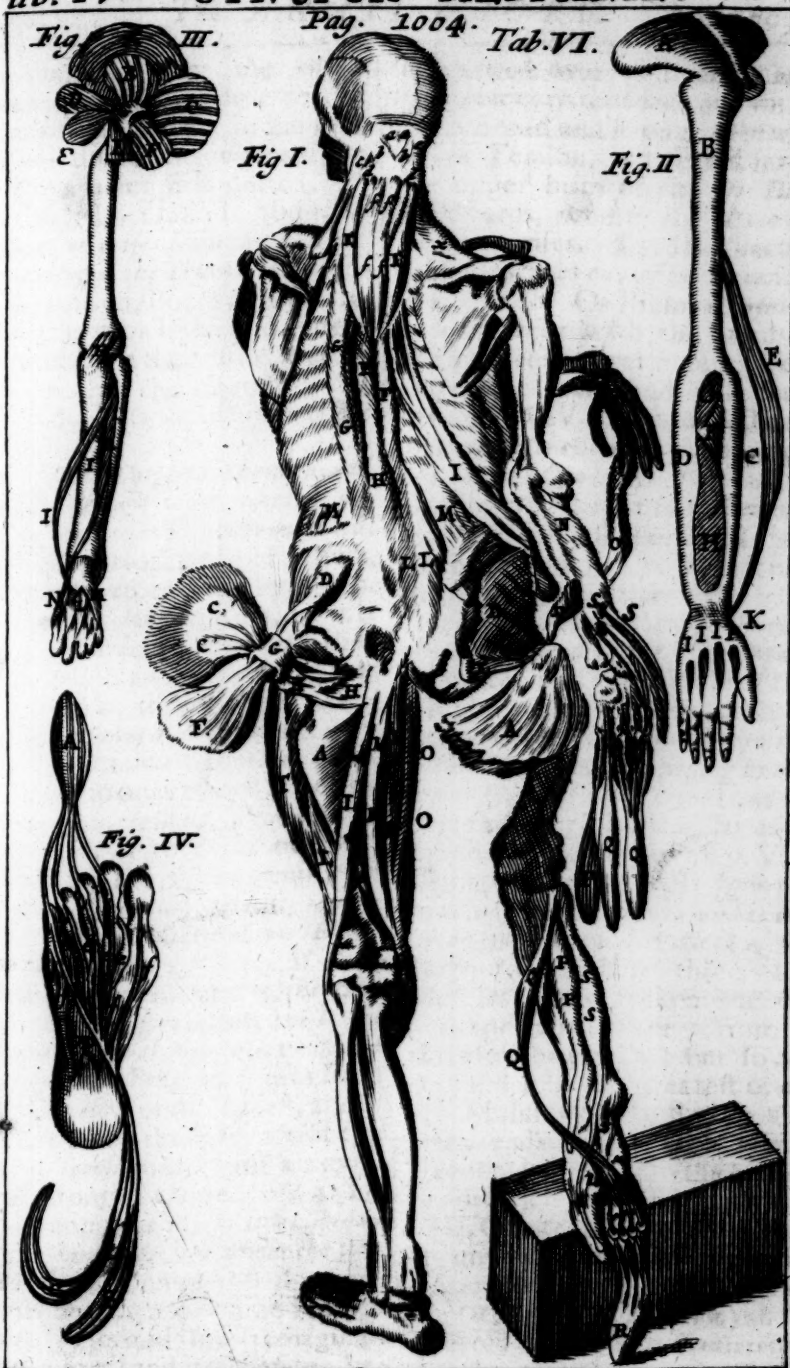
- A. The external face of the *Scapula*.
 B. *Shoulder Bone* covered with the
 C. *Os Radij*. (Periostion,
 D. *Os Ulnæ*.
 E. *Supinator longius Radij*.
 F. *Supina* or *brevis Radij*.
 G. *Musculus Anconeus*.
 H. *Ligamentum membranos. ulnæ*
 & *Radij*.
 III. *Interosseal Muscles & Auxil-*
lary.
 K. *Abductor of the Thumb*.

Fig III.

- A. *Internal Face of the Os Ilium*.
 B. *Glutæus minor* in its place.
 C. *Glutæus medius* out of its place.
 D. *Musculus pyriformis*.
 E. *Fourth Muscle moving the*
Thigh abduct.
 F. *Obturator Externus*.
 G. *Fleshy Purse*.
 H. *Musculus popliteus*.
 II. *Musculus perforans*.
 K. *Flexor tertij internodij* of the
 great Toe.
 L. *Musculus perforatus* in its place.
 M. *Abductor of the little Toe*.
 N. *Abductor in the great Toe* in its
 place.

Fig IV.

- a. The great adductor of the great
 Toe.
 bb. The abductor of the great Toe.
 c. The abductor of the little Toe.
 dddd. *Internal interosseal Muscles*.
 e. The lesser adductor of the great
 Toe.





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the Fingers, over the three Bones; till they come to the roots of the Nails; in the former and upper part whereof, the Tendons being first united, are terminated. § 11. XVII. Abductor Indicis, it arises from the first interjuncting of the Thumb, and is inserted into the Bones of the Forefinger, by which the said Finger is drawn from the rest of the Fingers towards the Thumb.

XXXIV. Of the Muscles of the Thigh.

§ 1. The Thighs are bended, extended, drawn to or wheeled inwards, and turned about outward, for the performance of which, there are sixteen Muscles. § 2. It is bent by four Muscles, to wit the Lumbaris, Psoas minor, Iliacus secundus, and Pectineus: It is extended by three, called Glutei, as the major or externus, medius, & minimus or internus: It is drawn to or wheeled about by the Triceps, primus, secundus, & tertius: It is turned about outwards by the Quadrigeminorum primus, secundus, tertius, quartus: and the Obturatores Externus and Internus. § 3. I. Psoas, Psoas, Primus Lumbaris, the first Loyn Muscle, spread over the Bodys of the Lumbal Vertebrae in the cavity of the Belly: it arises from the Vertebrae of the Loyns, and is inserted into the forepart of the small Trochanter, with a round and strong Tendon. § 4. II. Psoas minor, it is sometimes spread over, sometimes lies under the former: its beginning is fleshy, sometimes one, two or three Fingers broad in its middle: Its original, with a small and flat Tendon, be-

ing carried over or under the Psoas, comes to the Iliack and with a very broad and strong Aponeurosis or Tendon, is inserted into the upper brim of the Os Ilii backwards, where the Iliacus Internus arises. § 5. III. Iliacus musculus, rises out of the internal cavity of the Os Ilium, is joyned by its Tendon with the Lumbal Muscle, and is terminated between the great and little Trochanter. § 6. IV. Musculus Pectineus, Lividus, the Comb Muscle: springs out of the upper part of the Os Pubis, & inserted with a short Tendon into the inner-side of the Thigh on the fore-part. § 7. V. Triceps primus, arises from the upper joyning of the Os pubis, and passing by the inner Head of the Thigh Bone, is inserted into the middle of the Thigh. § 8. VI. Triceps secundus, arises from the lowest joyning of the Os pubis, and passing by the inner Head of the Thigh, runs along the Thigh Bone, as far as to the end of the Thigh. § 9. VII. Triceps Tertius, arises from the middle of the Os pubis, and is inserted just below the Neck of the Thigh Bone. These three last Muscles many reckon but for one, and called it Triceps from its threefold beginning; but so accounted it is the greatest of all the Muscles of the Body: and often ends in one musculous Tendon, inserted into the hinder line which is in the Bone. § 10. VIII. Gluteus major, externus & amplissimus, arises from the Coccyx or Crupper, (the Spine of the Os Ilii, and Os Sacrum) and is inserted into the Os Femoris under the great Trochanter. § 11.

IX. *Gluteus medius*, the middlemost both in situation and magnitude, arises from the inner side of the *Spina* of the *Os Ilj*, and is inserted into the great *Trochanter*, with a broad and strong Tendon. § 12. X. *Gluteus minimus* or *internus*, lies concealed under the middlemost; it springs from the back of the *Os Ilj*, near the *Acetabulum*, with a broad and strong Tendon, and is inserted into the great *Trochanter*: These last three, make up the fleshy substance of the Buttocks.

§ 13. XI. *Quadrigenus primus*, *Iliacus externus*, *Pyriformis*, Pear fashioned, it arises from the lower part of the *Os Sacrum*, and is placed upon the Articulation of the Thigh, as it were athwart, in the hinder part thereof. § 14. XII. *Quadrigenus secundus*, arises from the *Tuberosity*, or bunchy part of the *Ischium* or Huckle Bone, and covers the Articulation of the Thigh, as aforesaid.

§ 15. XIII. *Quadrigenus tertius*, is contiguous unto the former, and arises from the same part: all these three last are inserted into the cavity of the great *Trochanter*. § 16. XIV. *Quadrigenorum Quartus*, *Quadratus*, it is broader and more fleshy than the other three, being distant from the third of the *Quadrigeni*, two Fingers breadth; It springs from the inner part of the *Apophysis* of the *Ischium* or Huckle Bone, and is inserted into the external part of the great *Trochanter*. § 17.

XV. *Obturator Externus* takes up the wide hole, between the *Os Pubis* and *Os Ischij*, and arises from the outward Circle of the hole

of the *Os Pubis*, is circumducted through the Neck of the Thigh as through a Pulley, and carried unto the Cavity of the great *Trochanter*, under the fourth *Quadrigenal* Muscle. § 18. XVI. *Obturator internus*, *Bursalis*, arises from the inward Circle of the hole of the *Os Pubis*, is carried along through the Cavity which is between the knob of the *Ischium*, and its *Acetabulum* or Socket, and by a Tripartite Tendon is inserted into the Cavity of the great *Trochanter*.

XXXV. Of the Muscles of the Legg.

§ 1. The Leggs are bended, extended, drawn inwards, and thrust outwards, for the performance of which there are eleven Muscles.

§ 2. These four bend it, viz. *Biceps*, *Semimembranosus*, *Seminervosus*, & *Gracilis*: These four extend it,

to wit, *Rectus*, *vastus externus*, *Vastus internus*, & *Crureus*: These two pull it inwards, *Longus* or *Sartorius*, & *Popliteus*: and this one thrusts it outward, viz. *Membranosus* or *Fascia lata*. § 3. I.

Biceps, having two heads; the first springs from the joining of the *Os pubis*; the second from the outward part of the Thigh, along which (being united) they both run, about the middle whereof it becomes fleshy, and are both of them inserted with one Tendon into the hinder or outward part of the Legg. § 4. II. *Semimembranosus*, arises from the swelling in the *Ischium* and is inserted into the inner side of the Legg backwards. § 5. III. *Seminervosus*, has the same Original and insertion with the former, only in the hinder

part of the Legg.

der part it is carried a little for-
wards obliquely, before it ter-
minates at the inside of the Leg.
§ 6. IV. Gracilis, & Gracilis Posti-
cus, it rises from that line which
shews where the Hip-Bone and
Share Bones joyn together, and de-
scending along the inside of the
Thigh is inserted into the same
place with the former, viz. the
inner part of the Legg. § 7. V.
Rectus, & Rectus Gracilis springs
with an acute Tendon out of the
outward and lower Spine of the Os
Ilium, is carried right out along
the Thigh, and terminates in the
forepart of the Legg. beneath the
Epigonatis. § 8. VI. Vastus ex-
ternus, borders upon the rectus
Gracilis, and arises out of the root
of the great Trochanter, and is in-
serted into the Legg, a little be-
low the Patella on the outside.
§ 9. VII. Vastus internus, borders
as the former on the rectus Graci-
lis, and arises from the root of the
small Trochanter, and falls into
the inner side of the Legg, a little
below the Patella. § 10. VIII.
Crureus, it is placed under the two
Musculi Vasti, arises out of the
Thigh-Bone, between the two
Trochanters, and cleaving to the
whole Body of the Thigh (as
the Brachius does to the Bra-
chium) produces its Tendon over
the Epigonatis, unto the forepart
of the Legg. Bartholine saith,
That the four last Muscles are
inserted all into one Tendon,
which terminates in the begin-
ning of the Legg. § 11. IX.
Musculus Longus, Sartorius, sa-
scialis; this is the Taylors Muscle,
on which they rest themselves when
they sit cross-legged: it is nearly the

longest of all Muscles; arises
from the former Spina of the Os
Ilii, and descends obliquely into
the inner and forepart of the
Legg. § 12. X. Popliteus, it
arises from the lower and Exterior
Tubercle of the Thigh, and is in-
serted foursquare into the inner
and upper part of the Legg,
obliquely. § 13. XI. Membra-
nosus, fascia lata, arises fleshy from
the Spina of the Os Ilii, runs
obliquely into the outward part
of the Legg, and with its most
broad and long Tendon, invests
almost all the Muscles of the
Thigh.

XXXVI. Of the Muscles of the Foot or Instep.

§ 1. It is bended forwards, ex-
tended backwards, & moved oblick-
ly, for which purpose it has eight
Muscles. § 2. It is bended by the
Tibieus Anticus, And Peroneus
Anterior: It is extended by the
duo Gemelli, to wit, the Externus
and Internus and the Soleus: It is
moved obliquely by the Tibieus
posticus and Peroneus posticus. The
Sole of the Foot is bowed by the
Plantaris. § 3. I. Tibieus Anticus,
or Anterior; it is fastned to the Legg,
and arises from the upper Epiphysis
thereof, near the Fibula, and clea-
ving to the Tibia all along, it de-
generates into a Tendon, which
beneath the Ring-like Ligament
of the Foot is slit into two Ten-
dons, the one of which is inserted
into the Os primum innominatum;
the other being lengthned out,
into the Bone of the Metatarsus
under the great Toe. § 4. II.
Peroneus anticus, or Anterior
or Biceps, it is in its Original joy-
ned to the Peroneus posticus, and
has

has its rise with two Heads, one from the middle and external part of the *Perone* or lesser *focile*; the other from the upper *Epiphysis* of the *Fibula*: these being carried through the Chink of the outward Ankle or *Malleolus externus*, do terminate in a double Tendon, the lesser of which is carried into the Bone of the little Toe; the greater running obliquely under the Sole of the Foot, is inserted into the *Os Pedij* or *Metatarsus*, just against the great Toe. § 5. III. *Gemellus Externus*, *Gastrocnemius Externus*: this has two Heads as *Vesalius* first observed: they both rise from under the Ham, the one from the inner, the other from the outward parts of the end of the Thigh-Bone, which pass down the back part of the Legg, then becomes Tendinous, and being united, make one strong, broad and nervous Tendon, which is at last joyned to the Tendon of the *Gemellus internus*, and is inserted into the Heel. § 6. IV. *Gemellus internus*, *Gastrocnemius internus*, this with the other constitutes the Ankle, and lies under the former of a livid color; it arises under the Ham, from the *Apophysis* of the lesser *focile*, by a strong nervous substance; having passed the middle of the *Tibia*, it becomes narrower and tendinous: a little above the Heel, it is so united to the Tendon of the *Gemellus externus*, that they both seem but one, it is inserted into the Heel: by this Tendon Butchers hang up the hinder Joynts of the Beasts killed. They are

called also *Gastrocnemij*, because they make the Belly or Calf of the Legg. § 7. V. *Soleus*, it is a broad and thick Muscle arising from the upper and bindermore appendix of the *Fibula*, or closure of the *Tibia* and *Perone*, and is inserted by a Tendon mixed with the *Gemelli* or Twins, into the beginning of the Heel and *Pterna*. § 8. VI. *Tibialis posticus adducens pedem*, it arises from the upper part of the *Tibia*, or greater and lesser *focile*, and from the Ligament which ties them together, runs along the *Tibia*, and through the cleft of the inner Ankle-Bone produces two Tendons, one of which terminates at the *Scaphoidean Bone*, the other at the *Primum Os innominatum*. § 9. VII. *Peroneus posticus*, or *Fibularis*, it arises from the upper but hinder part of the small *focil*, by a nervous and strong beginning, and cleaving to the outside of the *Perone*, it runs down round and fleshy: when it comes to the middle of the *Focil*, it becomes Tendinous, then running obliquely behind under the outward Ankle, it is inserted under the Sole of the Foot, into the Bone set before the great Toe. § 10. VIII. *Plantaris*, it lies under the *Gemellus externus*, is lean and thin, covers the whole Sole of the Foot; and springing from the outer part of the end of the Thigh-Bone under the Ham, by a round and fleshy beginning, passing within the Legg, between the *Gemelli*, it goes thence to the Sole, and is inserted into the five Toes, about the first Joynt.

XXXVII. Of the Muscles of the great Toe.

§ 1. The great Toe is bended, extended, drawn to, and thrust from: for the performance of which it is accommodated with five Muscles. § 2. The first bends it: the second extends it: the third and fourth brings it to: the fifth thrusts it from. § 3. I. Primus or flexor pollicis, arises from the upper part of the Fibula, and is inserted into the third (with Riolan the first) interjuncture of the great Toe. § 4. II. Secundus or extensor pollicis, arises from the middle of the Tibia, or from the outside of the Fibula, creeps along the surface of the Foot, and ends in two Tendons, the one of which is inserted into the whole great Toe in its upper side; the other into the Os Metatarsi under the great Toe. § 5. III. Tertius pollicis, adductor primus, that which draws the Toe inward, and springs from the Ligament which ties the Heel-bone and the Talus, is fastned inwardly to the Bone set before the great Toe, and by a round Tendon is inserted into the first Joynt of the same. § 6. IV. Quartus pollicis, adductor secundus, transversalis, adductor pollicis minor, it arises nervous and broad from the Ligament of the first interjuncture of the little Toe, (and sometimes from one of the Toes next the little Toe) then becoming fleshy, and so continuing, it runs over the first Joynts of the Toes and with a short and broad Tendon, it is inserted a little inwards into the first Joynt of the said great Toe. § 7. V. Quin-

tus Pollicis, Abductor ejuldem, it arises fleshy, from the inner part of the Heel, and is inserted extrinsically into the first Bone of the great Toe.

XXXVIII. Of the Muscles of the four little Toes.

§ 1. The little Toes are bended, extended, drawn to and thrust from: all which motions are performed with eighteen several Muscles, having Tendons comprehended with a Ring-like or Circular and transvers Ligament, which encompasses them beneath the Ankles, just as in the Wrist. § 2. They are bended with two flexors major and minor: extended with two, longus & brevis, drawn to with four Lumbricales: Thrust from with the ten Interossæi. § 3. I. Musculus major, flexor, longus, or Perforans, it lies under the Gemellus internus, arising from the upper Epiphysis of the Tibia under the Ham by a long and fleshy beginning; passes according to the length of the Tibia, cleaving to it, runs under the inner Ankle, and by the hollownes of the Heel, goes to the Sole of the Foot, where it is divided into four Tendons and passing through the holes of the flexor brevis, is inserted into the third and last joynt of the four Toes. § 4. II. Flexor minor, brevis, or Perforatus, lies in the midst of the Sole of the Foot, arising from the inner part of the Heel-Bone, and passing the said middle, is divided into 4 round Tendons (all which are perforated for the passage through of the former Tendons) which are carried and inserted into the second Articula-

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tion of the four Toes. § 5.

III. Extensor longus, arises with a nervous and sharp beginning from the upper Appendix of the great foal or Tibia, and cleaving to the Ligament which unites the foals, runs down to the Foot, passing first under the transverse Ligament; then being divided into four Tendons, they are inserted into the second and third Joints of the four Toes. § 6.

IV. Extensor brevis, it lies under the former, arises from the transverse Ligament fleshy and broad, and is by four Tendons inserted into the first Joints of the four Toes. § 7. V. VI. VII. VIII.

Lumbricales Quatuor: they arise from the Tendons of the Perforans, small and round, and are inserted by so many small Tendons, into the sides of the first Joints of the four Toes. § 8. IX. X. XI.

XII. XIII. XIV. XV. XVI.

XVII. XVIII. Interossei decem,

they arise from the Bones of the Pedium, and are placed between the Bones of the Foot, filling the void spaces of the Metapodium, being ten in number; five external, and five internal: They with a broad Tendon do arise by the sides of the Bones of the instep, the former to the first interjoints in the sides of the Toes; the latter to the second interjoints.

The ninth of the Interossei is the Abductor of the great Toe: the

tenth and last is the special Abductor of the little Toe.

XXXIX. An Enumeration of all the Muscles in Mans Body.

§ 1. In the Head there are 18. in the Eye-lids 8. in the Eyes 12. in the Ears 12. in the Nose 8. in the Lips 15. in the lower Jaw 12. in the Os hyoides 8. in the Tongue 10. in the Larynx 14. in the Uvula 4. in the Throat 7. in the Neck 8. in the Breast 17. in the Lungs 8. in the Abdomen 10. in the Os Ilium 4. in the Penis in Men, or Clitoris in Women 4. in the Coals 3. in the Bladder 2. in the Anus 5. in the right Shoulder 4. in the left 4. in the right Arm 9. in the left 9. in the right Ulna 8. in the left 6. in the right Radius 4. in the left 4. in the right Wrist 4. in the left 4. in the right Palm 2. in the left 2. in the right Thumb 10. in the left 10. in the right Fingers 17. in the left 17. in the right Thigh 16. in the left 16. in the right Legg 11. in the left 11. in the right Foot 8. in the left 8. in the right great Toe 6. in the left 6. in the right little Toes 17. in the left 17. § 2. All these being computed and gathered together into one sum, shew the number of all the Muscles in mans Body to be 417. by which the great Fabricator of all things has completed all the various motions exercised through the whole humane frame.

CHAP.

CHAP. VII. Of BONES.

I. OF a Bone in general.

§ 1. A Bone is a similar, spermatick part, cold and dry, endowed with hardness, strength, and solidity, that it might give force to the Body, sustain it, and help its motion.

§ 2. Its substance is naturally hard; solid, (except its spongy ends;) covered with a Membrane called Periostion, white with some redness; hollow in the middle (except the Ribs, &c.) smooth: covered in its extremities with a Cartilage; and moistned with a fat humour called Medulla or Marrow.

§ 3. Some Bones are perfectly generated in the womb, as those in the Ear being the smallest in the whole Body, and others: other Bones imperfectly as the Teeth, in which somewhat is wanting as a process or an Appendix.

§ 4. They are nourished by Arterial Blood, as may appear in the Bones of young Animals, whose marrow is yet Bloody, as also by Blood contained in the Marrow: 'tis true that Platerus denys the Bones to have Arteries because they are inconspicuous, but Spigelus contradicts him.

§ 5. But the proximate and immediate nutriment of hollow Bones is (according to Hippocrates and Galen) the Marrow contained in the said Bones: but of Bones not hollowed thick Blood sent in through the Pores.

§ 6. The proper matter therefore of a Bone is

Seed, (which all Physicians assent to,) the Seed consists of humors and spirits; the humors are of two parts, one thinner, the other thicker; of the thinner are formed the more noble parts; of the thicker the Bones: The efficient cause, is the *Vis officina*, or Bone making power or faculty; or an innate faculty acting by the assistance of heat: The formal cause of a Bone is the Soul, as of the whole; and in the next place the *Ratio formalis*, whereby a Bone is a Bone only, and no other thing: The Ends or uses of the Bones are, first to sustain the whole Body: secondly, for preservation of some parts, as the Skull for the Brain: Thirdly, to serve for going, and acting: fourthly, for several private uses, according to their Seat. § 7. The situation of the Bone is deep, commonly in the middle of the flesh; that they may the more equally uphold the whole. § 8. Their magnitude is according to the variety of the parts and places where they are, as also according to the ends and uses: those of the Ears, the Sesamoidean Bones, the Teeth, Wrist-Bones, &c. are small: those of the Shoulder, Arm, Thigh, Leg, &c. great. § 9. Their number is manifold, for the variety of motions, and particular uses: Their figures are according as their situation and con-

nection require, as long, round, flat, sharp, blunt, prominent, &c. Their color is commonly white, mixt with a little red. § 10. They are all of them externally inclosed (not internally) with the *Periostion*; the Teeth, the *Sesamoidean* Bones, and the sides of Bones where they are mutually joyned, only excepted; from the *Periostion*, they borrow their Sence, for otherwise of themselves they want the Sence of feeling: yet the Teeth are said to feel, for that they feel exceeding cold Air, or drink, yea with their very ends, especially when they are on Edge, by eating sower things. § 11. The substance of the Bones is hard with a shining fattiness with a Volatile Spirit and Salt: in Infants, if they be broken, they often joyn and unite together again: but in persons of ripe years, they cannot truly grow together, nor be regenerated; then they are conjoyned or glued together with a Callous, which Galen calls *Porus*. § 12. The Marrow of the Bones is of it self altogether insensible, but it is invested with a Membrane, which is exceeding sensible: in the Cavities of great Bones it is white mixed with red; in the lesser it is wholly white, in the spungy Bones it is soft and juky. § 13. The Cavities of the Bones, are either within the Bones where the Marrow is, or without the Bones at the joynings, where the head of one Bone enters into the Cavity of another. if these hollowneses be deep, they are called *κοτόλαι* or *κοτολίδες*, *Cotolai* or *Cotolordes*, *A-*

cetabula, Sawcers, which was among the Ancients a kind of drinking Cup: if the Cavities are Shallow, they are called *γλῆναι*, *Glenai*, and *γλῆνοειδείς*, *Glenoides*, shallow entrances. § 14. The solid parts of the Bones are threefold, first *Os*, secondly, *Epiphysis*, thirdly, *Apophysis*. § 15. *Os*, properly so called, which is the first and principal part, is the hardest part, and seated for the most part in the middle of the Bone. § 16. *Epiphysis*, ἐπιφύσις, called also *Appendix*, *adnascencia*, *additamentum*, is a Bone growing out upon a Bone, at the end thereof; softer than the Bone, of a rare, loose and spongy substance, being at first for the most part Cartilaginous: the conjunction of this *Epiphysis* is by a simple and immediate contact, not with an absolute plain surface, but with a little mutual ingress of heads and hollows, like *Ginglymus*, but without motion; but in persons grown to years, it is hardened, and more absolutely conjoyned to the Bone; yea, so united, as if they were but one Bone, in so much that the *Epiphysis* degenerates into an *Apophysis*, for that no Footstep of the Ancient divisions remains: at the ends of the *Epiphysis* a Gristle is placed: the use of the *Epiphysis* is 1. in soft Bones to be as a Cover, that the marrow may not run out. 2. for firmness and strength of the part. 3. to send forth Ligaments. 4. to be a medium of union between the Bone and the Ligaments. They are not found growing upon all Bones; yet they may be seen in the *Scapula*, in both the

Focils of the Leggs, as Tibia and Fibula, at both ends, the bunching out of the second Vertebra, in the Rotator magnus and Appendices Stryloides : and indeed every head of a Bone is in its own nature and original an *Epiphysis*, but in process of time it degenerates into an *Apophysis*.

§ 17. *Apophysis, ἀποφύσις, called also προεξοχή & ἐκφύσησις, Probo-len and Ecphysism, Processus, Pro-ductio, projectura, Extruberantia, Tuberculum, a Prominency* ; it is a part of a Bone, not added, but bunching out above the smooth superficies, not only touching as an *Epiphysis*, but a continued substance as one Bone ; such are the extremities of the Bones called *enata*, in the *Vertebrae* of the Back, in the lower Jaw-Bone, &c. Their use is for the original and insertion of parts as Muscles. In some places they are called *Capita, Heads* ; in other places *Cervices, Necks* ; in other places *Tubercula, Bunches* ; in other places *Spinae, Thorns* : in other places *Mucrones, sharp Points*. If the *Apophysis* is a low promi-nency and flat, it is called *Condylus* : if round, *Caput* ; if with a sharp point, *Corone, or Spina* : if long, *Styloides, Bodkin-like* ; if crooked *Coracoides, Crow-like* : if Tooth-like, *Odontoides*. § 18. *The Bones are subject to many Dis-eases, as* 1. *Ulcerous Excrescen-cy.* 2. *Carries.* 3. *Exostosis.* 4. *Kedmata.* 5. *Hydarthrosis.* 6. *Anchylosis.* 7. *Fractura.* 8. *Lu-xation.* 9. *Pararthrema*, when the Bone is only lengthned not out of Joynt. 10. *Cancer of the Bone, called also Spina Ventosa,*

the cause of which is a sharp hu-mour first corroding the Bone, then making its way through the *Periostium*, after which follows an ulcer of the flesh and skin, in-curable before the Bone is made Sound : the Orifice is very lit-tle, the edges pale, the matter thin, the flesh soft and swelled, or becomes spongy : See the the Cure in lib. 3. cap. 24. sect. 15. § 16.

H. *Of the Connection, or Con-junction of Bones.*

§ 1. *The Bones are joyned toge-ther according to Galen κατὰ ἀρθρῶν vel κατὰ σύνζυσις, either by Sym-physis, for firmness and union ; or by Arthrosis, Articulation or Joyning* § 2. *Σύμζυσις, natural u-nion or growing together, is when the connection or joyning of Bones is without motion*: and this is two-fold, to wit, without a Medium, or with a Medium. § 3. *Sym-physis without a medium is three-fold, to wit, by Sutura, Harmo-nia, and Gomphosis.* § 4. *Παρή, Sutura, a Suture is the joyning of Bones by Indenture, as if the Teeth of two Saws, or Combs, were thrust one into another, as in the Bones of the Cranium or Skull.* § 5. *Ἀρμονία, Harmonia, is the joyning of Bones by a single line, whe-ther strait, oblique or circular, as in the Bones of the Nose, and upper-Jaw, and so all Epiphyses in a manner are joyned.* § 6. *Γόμφωσις, Gomphosis, or Nailing, when one Bone is fastned into ano-ther, as a Nail in a Post ; so the Teeth are fastned in the Jaw-Bones.* § 7. *Symphysis, with a medium, is also threefold, by reason of a threefold Body coming between;*

to wit, by Synchondrosis, Syneurosis, and Syssarcosis. § 8. Συγχονδρώσις, Synchondroosis, is a conjunction by a Cartilage, or Gristle, as in the Bones of the lower Jaw, the Sternum, the Os Pubis, &c. § 9. Συνεύωσις, Syneuroosis, is a conjunction made by a Ligament, as in the Hip or Huckle-bone with the Thigh-bone. § 10. Συσάρκωσις, Syssarcosis, is when a Conjunction of Bones is made by flesh, or a Muscle, as in the joining of the Os Hyoides with the Scapula. § 11. Ἀρθρώσις, Arthrosis, Articulatio, or joining of Bones, is a certain conjunction of Bones ordained for motion, and this is twofold, viz. by Diarthrosis, and Synarthrosis. § 12. Διαρθρώσις, Diarthrosis is a loose and manifest Articulation, as in the Fingers, Wrists, Elbows, Shoulders, Hips, or Thighs, Knees, Ankles, Toes; and it is threefold, to wit, Enarthrosis, Arthrodia, and Ginglymos. § 13. Ἐνάρθρωσις, Enarthrosis, In articulation, is when the Cavity receiving the Bone, and the process or head of the Bone to be received are both great, as in the Articulation of the Hips with the Thigh-bones. § 14. Ἀρθρώδια, Arthrodia, is where the Cavity receiving is superficial, and the process or Head received flat, as in the hinder part of the Head, with the first Vertebra of the Neck; or in that of the lower Jaw, with the Bone of the Temples. § 15. Γίγγυμις, Ginglymus, is when the same Bone receives and is received, as is usually seen in the hinges of doors and windows; Or it is an Articulation of Bones by mutual reception; and it is either

Simple or Compound: It is simple, as in the juncture of the Elbow and Arm: It is Compound, when it consists of a double Articulation, either in the same Extremities as is seen in the Vertebrae of the Neck: Or in places distant by two or three Bones, as in all the Vertebrae of the Back and Loyns: for the Vertebra being placed in the middle receives the upper, and is received by the lower. § 16. Συνάρθρωσις, Synarthrosis is an Articulation with a motion doubtful or obscure; and such is that of the Ribs with the Vertebrae; and the Bones of the Wrist and Pedum with the Bones adjacent. § 17. This is also as the former threefold, to wit, by Enarthrosis, Arthrodia, and Ginglymus; which here need no farther explication: save they are thus distinguished; the former may be called Enarthrosis, Diarthroides, Arthrodia Diarthroides, Ginglymus Diarthroides: the latter may called Enarthrosis Synarthroides, &c.

III. Of the Sutures of the Head, or Skull.

§ 1. The whole Structure of the Bones of the Head is called Cranium, the Skull; because it is as it were κέρας, an Helmet; it is also called Calva and Calvaria. § 2. Its substance is Boney to secure the soft Brain, but in new born Children, it is softer than ordinary; in some places Cartilaginous and membranous, especially about the Sutures, and in the middle and upper region of the Head. § 3. This substance is thick not thin, that it may more strongly resist external injuries: it is also

rare

rare or spongy, not compact, that it might not weigh too much; that it might contain juyce for nourishment; and that through those Pores, Vapors might exhale. § 4. *The Skull consists of a double Plate or Table, (for it is seldom single without a Meditullium, or middle matter:) They are called by some Diphas, the outer Table whereof, being unhurt, the inner may be hurt; each of these Plates or Tables is for the most part polished within and without, smooth and thick; by which it appears that the Skull is almost every where double; but in some places it is single, thin and transparent, without any distance of Tables. § 5. The Meditullium is rare and lax, and receives little Veins: the upper or external Surface is smooth and even: the lower or Basis is rough and uneven, by reason of several Appendices and procceses: The upper internal is hollow, smooth, with marks of Veins and certain Cavities: the lower internal is uneven by reason of several prominencies. § 6. The Skull is also every where full of holes, very small and without order, through which small Veins and Arteries pass to the inner Cavity of the Bones and *Dura meninx*; yet sometimes they are wanting. § 7. Now the Skull is not one only Bone, but consists of many, which are fastned together by Sutures: what a Suture is we have defined Sect. II. § 4. foregoing. § 8. The Sutures either proper or common. § 9. The proper are either true or false: the true are those which represent two Saws joyned to-*

gether by their Teeth: and these are in number three. § 10. *First Coronalis, it is seated in the Forepart, and passes from one Temple to the other transversely, from the Temples it ascends on both sides athwart to the Top of the Head: it is found out in a living person, by drawing a Thread out from Ear to Ear, and another cross the same from the Tip of the Nose. § 11. The second Lambdoides, opposite to the former, resembling the Greek letter Δ Lambda; this is seen in the Occiput or hinder part of the Head; some call it Hypsileides, and *Priæ sutura*: It ascends obliquely from the Base of the Occiput to each Ear, and grows into an Angle. Sometimes where the Occiput is large, it is divided by a transverse Suture, simple, double, and sometimes triple, as if a greater Triangle did contain within it, one or two, lesser Triangles: these Bones so comprehended are called *Ossicula triangularia*, much commended in the Epilepsy. § 12. *Thirdly, Sagitalis: it is in the middle between the former two and runs in a straight Line all along the Head like an Arrow, between the Coronalis and Lambdoides, and reacheth sometimes to the Nose: or it proceeds through the middle of the Coronal Suture, and middest of the Forehead as far as the Nose. § 13. The Mendosæ or false Sutures called also Bastard Sutures, are two, and commonly called Squammosæ, Scaly Sutures, also Corticales and Temporales: There is one above each Ear: they begin from the back side in the lower part**

of the *processus mammillares*, and pass through the whole side of the Skull, uniting the Bones of the Temples with those of the Vertex. § 14. The common Sutures are those which belong unto the Skull, the wedge-like Bone, and the upper Jaw: The principal of which are the *Frontalis*, the *Cuneiformis*, and the *Cribrosa*. § 15. I. *Frontalis*, is that by which the outward process of the *Os Frontis*, is joyned to the first Bone of the upper Jaw. § 16. II. *Cuneiformis*, is that by which the wedge-like Bone (being in the middle of it) is joyned with the first Bone of the upper Jaw. § 17. III. *Cribrosa*, this is that which is common to the *Os Sphænoides*, or wedge-like Bone, and the *Septum* or partition of the Nose. § 18. The uses of the Sutures in general are: first, to stay the Brain, and hold fast the *Dura mater* from pressing it, by sending Fibres from the *Dura mater* through the Sutures: Secondly, that the *Dura mater*, by those Fibres might constitute the *Pericranium* and *Periostrion*: Thirdly, That those Vessels (called by *Fallopins*, *Venæ Puppis*) might go in and out, to nourish, & enliven the parts: Fourthly, to breath out the fuliginous Vapors sent unto the Brain from the lower parts: Fifthly, to stay Fractures from going farther; that one Bone being broken, others might remain whole: Sixthly, that Topical Medicines being applyed, they might the more easily penetrate.

IV. Of the Bones of the Head or Skull.

§ 1. The Bones of the Head are either proper or common: the proper are in number six, 1. *Os Fron-*

tis: 2. 3. *Os Sincipitis*: 4. *Os Occipitis*. 5. 6. *Os Temporum*. § 2. The common Bones are only two in number, 1. *Os Sphænoides*. 2. *Os Ethmoides*. § 3. I. *Os Frontis*, the Forehead Bone, called also *Os Puppis*, *Coronale*, and *Inverecundum*: it is bounded before by the Coronal, and first common Suture; and in the sides by the Temporal Bones: it is but one in those of ripe Age, but in Children it is double, being divided by a Suture passing from the Coronal to the Nose; it also has a twofold Table, an internal and an external: On each side of this Bone, above the Ey-brows, there are large Cavities commonly two in number, between the two Tables, cloathed sometimes with a green Membrane, and containing a soft, clammy and marrowish substance; from whence two holes pass into the wide spaces of the Nostrils: and another which ends into the Skull above the *Septum* of the *Os Ethmoides*, to distinguish the Organs of Smelling. The use of these Cavities are, 1. To make the Voice melodious and sounding. 2. To contain the Air drawn in by the Nostrils, which brings the smells of things along with it, from whence it passes leisurely to the Organs of Smelling and to the Brain. 3. To contain a thick and also watery matter to be carried to the *Glandula Lachrymalis*, to make Tears of: the thick and marrowy matter thereof is thought to pass through the hole of the greater Corner of the Ey, to moisten the Eye, that it may move the easier. This Bone has

also four processes; the greater two are seated about the greater corners of the Eyes; the lesser two about the lesser corners. It hath also three holes, of which we have spoken before; but the two outward at the middle of the Eyebrows, which goes to the Orbit of the Eyes, are the throughfare of the Nerves of the third Conjugation to the Forehead. § 4. II. III. Βεῖμματ' ὀστέα, *Ossa sincipitis, vel Verticis, parietali, arcualia, nervalia, rationis, Cogitationis*, the Bones of the Bregma, or fore-part of the Head. These cover the moistest and softest part of the Brain, are in shape foursquare and unequal, and of a more rare or spongy substance than the other Bones, whence the Wounds of the *Sinciput* are deadly: They are joyned before with the Bones of the Forehead, with the *Coronal Suture*; to the *Os Occipitis* by the *Lambdoide Suture*; and to the *Ossa Temporum* by the *Sutura Squamosa*: without they are smooth, but within unequal by reason of the prints which the *jugal Veins* of the *Dura mater* leave behind them. In Infants those parts of them at the *Coronal* and *Sagittal Sutures* are often found membranous and soft: and of all the Bones of the Head do last receive a boney hardness, which is about the time that the Child begins to speak distinctly; hence in Children in that place there is observed a Gap or Chink, *Bariboline* saith. He once observed it not yet boney, but membranous in a man 40 years of Age: and *Pauline* found it remaining open in a Woman twen-

ty six years old. § 5. IV. *Os Occipitis, Os basillare, Os proae, Os memoriae, Os pyxidis* in Greek *ἰνὸν*, the Bone of the hinder part of the Head; it constitutes almost all the hinder part of the Skull; and is in Children 3 or 4 Bones, but in grown persons but one Bone. Its form is that of a *Spherical Triangle*, and is joyned to the Crown-Bones by the *Suture Lambdoides*. It is the thickest & most compact of all Bones of the Head chiefly at the Basis of the Skull, (because there the noble Ventricle is seated, and from thence the nerves arise as from a Fountain) but at the edges it is the thinnest of all. It is smooth without, but within it has many sinuosities to receive the meninges safely. It has five holes, through the greatest whereof, (near the first *Vertebra*) the *spinalis Medulla* or *oblongata* passes to the Back-bone. The lesser serve for the going forth of the Nerves, and entrance of Veins and Arteries. It has nine Cavities, seven within, and two without: and two broad processes at the *Basis* (in Children *Epiphysis*) covered with a Gristle, which is more eminent, and inserted into the Cavities of the first *Vertebra* for the motion of the Head: as also another small process behind joyned to the first *Vertebra*. § 6. V. VI. *Ossa Temporum, Lapidosa, Petrosa, Saxeae, Squamisformia, Mendosa, Parietalia, & Arcualia*, The Bones of the Temples by the Ears. Their form is uneven, almost Circular because of their various substance, which is like Rocks and craggy Cliffs, for which cause they

they are also called *Ossa Petroſa*, the ſtony or rocky Bones. In their upper part they are attenuated like a Scale, ſo as to be tranſparent; and are joyned to the Bones of the *Sinciput* like Scales: before they are joyned to the firſt Bone of the upper Jaw, by its firſt proceſs; and to the *Os Occipitii*, by the baſtard Suture: they have ſix holes without, two within; the firſt external hole is large, viz. *Meatus Auditorij*, the Auditory paſſage: the other five are ſmall for Veſſels to paſs through. They have two Cavities, an outer, covered with a Gristle, which receives the lower Jaw-Bone; and an inner, which is longiſh, and common to the *Os Occipitis*; and has an *Appendix* called *Styloides*, *Graphioides*, *Pleſtrum* and *Belenoines*. In the rocky part there are 3 other proceſſes, *Mastoïdes*, *Zygomatica*, and *Auricularis*. The *Mastoïdes* is external, obtuſe, thick, ſhort, & cavernous, or ſpongy, & is called *Mammilla*: is from its Dug like ſhape. The *Zygomatica* is alſo external, and a part of the *Os Jugale*: Now the *Os Jugale* or *Zygomatis* (ſeated under the Eye) is not a peculiar Bone, but is made up of the proceſſes of two Bones, to wit, that newly named, and that of the upper Jaw, joyned by an oblique Suture, making as it were a bridge. The *Auricularis* is internal with a long protuberancy, wherein there is a threefold Cavity, viz. the *Drum*, the *Labyrinth*, and the *Cochlea*. The *Tympanum*, *Conchæ* or *Drum*, called alſo *Pelvis*, which contains the internal or inbred Air, and the four Bones, called *Malleus*, *Incus*, *Stapes*,

and *Orbicularis*: as alſo, a Ligament, two *Feneſtra* or Windows, (which are little holes in the Cavity) and a water paſſage; from this Cavity goes a Channel into the *Pallat* of the Mouth. The *Labyrinthus*, called alſo *Fodina*, is a cavity full of crooked and manifold Turnings, the entrance hereinto is the *Oval Feneſtra*, and joyns it ſelf to the following Cavity: it has four holes beſides the Oval, and a fifth which is terminated in the *Cochlea* or third Cavity. The *Cochlea*, *Cavitas Cochleata*, *Buccinata*, *Antrum Buccinoſum*: it has three or four Windings (with a Wreathed or Snail like Figure) the windings mutually receiving one another: thoſe that are thick of hearing have only one or two of thoſe Windings: this Cavity is cloathed with an exceeding thin and ſoft Membrane: and adorned with multitudes of little Veins, which turn themſelves about the Wreathings of the *Cochlea*, and by many branches creep into the ſecret turnings of the *Labyrinth*. § 7. VII. *Os Sphenoides*, *Os Cuneiforme*, *Polymorphos*, *Multiſorme*, *Paxillare*, *Colatorij*, *Os Palati*, the Wedg-faſhioned Bone, becauſe it is ſeated as a Wedg in the middle of the Bones of the Skull; before it is joyned with the Forehead Bone: and behind to the *Os Occipitis*; at the ſides it goes along with the *Os petroſum*, from whence it is ſeparate by a rough Chink; above it doth touch the firſt, fourth, and ſixth Bones of the upper Jaw: below it touches the Bones of the *Pallat* of the Mouth by the

Wing

Wing-like process: and is placed under the Brain, as a Foundation; so that it touches well-near, all the Bones of the Head and upper Jaw. In Children it is made of four Bones, but in grown persons, it is but one. It is solid and the thickest of all the Bones of the Head, where it makes the *Basis* of the Skull. In the *external Table* are two remarkable *Apophyses*, near the sides of the holes of the Nose, formed like to the Wings of a Bat, and therefore called *processus Aliformes*, *Pterigosides*. Wing fashioned, also *Naviculares*, These have a long Cavity. In the *Internal Table*, are four little processes in shape of a Turkish saddle, called *sella Turcica*, and *sella sphenoides*, being two on each side, between these is a Cavity interjected to hold the *Glandula pituitaria*. At the Saddle there is a Cave full of little holes, whose uses are, to elaborate the in-breathed Air, to make Spirits: and to pass out *Pituitous* Excrements through the Funnel, out of the Ventricles of the Brain. It has sundry perforations, by which the *Optick* and *Motory Nerves* of the Eye, and other Nerves for the motion of other parts, as also Veins and Arteries for nourishment, pass.

§ 8. VIII. *Os Spongoides*, *spongiosum*, *spongiforme*, called in Greek *σφγγοειδης*, *Ethmoides*, *Cribiforme*, *Cribrosum*, the Sponge, or Sieve-fashioned Bone, having in it many holes, (by which smells pass to the Brain,) especially in the inner side of it, where it joyns to the Head, & this part is properly called *Cribrosa*: from this within the Skull arises a sharp *Apophysis*,

resembling a Cocks-Comb, (which is the second part of this Bone) and by which the *Ethmoides* is divided into two parts: from this process is opposed another, without the Nostrils, and distinguishing them, called the divider of the Nostrils, as also *Septum nasi*. To this *Septum* sticks two spongy Bones, which make the fourth, and fifth parts of the *Ethmoides*. The sixth and seventh parts of the *Ethmoides* are two smooth and plain Scales, as broad as a mans Thumb, and joyned to the Socket of the Eye, making the internal side of each *Orbita*, beside the great *Canthus*. The chief uses of the *Ethmoides* is to alter the Air drawn-in with smells, that the species of odours may with the Air be carried to the *Mammillary processes*, the Organs of Smelling, which end in these holes; and therefore in a *Coryza*, this Bone being obstructed, the Smelling is lost: also hereby the Brain is purged; for Flegm is not only evacuated by the *Glandula pituitaria* into the *Pallat*, but also by the *Os Cribrosum* into the Nostrils.

V. Of the Bones of the upper Jaw.

§ 1. They are in number eleven, five on either side, and one without a fellow. § 2. I. pair, *Ossa Zygomatica*, the *yoak Bones*: *Galen* calls the *Zygomaticum*, *Melon*, it is in a manner *Triangular*, & constitutes the greatest part of the *Os Zygomaticis* or *Jugale*, and a great part of the *Orbita* and outward Angles of the Eye, on the lower side. § 3. II. Pair, *Os Lachrymale*, *Os Unguis*, it is a round, little, and thin Bone, in the inner

inner corner of the Eye, constituting of the same, whereon the *Caruncula Lachrymalis* resteth; in the lower part of it there is an hole, which passeth to the Cavity of the Nose: by this a branch of the fifth pair of Nerves of the Brain, pass to the inner membrane of the Nose. § 4. III. pair, *Os Maxillare, Os Malæ, The Cheek-Bone, the greatest and thickest of them all*; it contains all the upper Teeth, and makes up the holes of the Nose, and most of those Bones which belong to the upper part of the Face: it is joyned above the *Os Frontis*, but below with the Wedge-like Bone: before, with the *Os Lachrymale*: behind with the third, and last of all with its fellow. It has large Cavities (and holes, through which Vessels pass) on both sides very remarkable, both that it might be less ponderous, and that it might contain Marrow to nourish the Bones and upper Teeth. § 5. IV. pair, *Os Nasi, The Bone that constitutes the external and prominent boney part of the Nose*: it is thin, hard, solid and Quadrangular. these two Bones are joyned with a Suture, within they are rough, that the Gristles of the Nose may be the better fastned. § 6. V Pair, *Os palati, seated at the end of the Palate, where the holes of the Nostrils go into the Fauces or Throat*; they are thin, solid, and broad, and constitute the hinder part of the Cavity of the Palate and Nostrils. § 7. VI. *Vomer, the Bone without a fellow, like a Plough*; it is the inmost and middlemost under the *Sphænoïdes*, and above the

Pallate: it holds up the Bridge of the Nose like a Partition wall, to which it is joyned by the Suture, *Harmonia*. § 8. Corallary, I. Hence it appears that six Bones constitute the Orbit of the Eye, 1. the *Frontale*, which makes the upper vaulted part. 2. *Zygomaticum* that on the outside where the lesser corner is, and a portion of the *Os Sphænoïdes*. 3. Another on the out side, concurring with the former part of the *Os Sphænoïdes*. 4. *Maxillare*, and 5. *Lachrymale*, which constitute the inner part. 6. The Scaley Table of the *Os Ethmoïdes* which makes up the lower side, all united partly by common, partly by proper Sutures. § 9. Corrolary II. The Nose also is constituted of four Bones, two, which are proper before named, and two, which are common to other parts.

VI. Of the Bones of the lower Jaw.

§ 1. In Children till seven years of Age, the lower Jaw consists of two Bones, which are joyned together by *Synchondroosis*: but in grown persons (which is that which we here consider) it is but one Bone only. § 2. Its figure is like the Greek ν ; the arched part is the Chin; at each end of the Shanks are two processes, whereof one is sharp, called $\kappa\omicron\sigma\epsilon\upsilon\nu$, *Corone*, going forward, into which the Tendon of the Temporal Muscle is implanted, and hence it was, that *Hippocrates* said the Luxation of the lower Jaw-Bone was deadly: the other $\kappa\omicron\nu\delta\upsilon\lambda\omicron\delta\eta\varsigma$, *Condylodes* or *Articularis*, because it serves for Articulation, with the Temple Bones, which Articulation

culation is covered with a common membranous Ligament.

§ 3. *Its substance is exceeding hard and strong, that it may hold out in biting and chewing* : within it, there is a long Cavity, which arises at the roots of the former processes, where Marrow is contained to nourish it, and the Teeth ; and by which a branch of our fifth pair of Nerves of the Brain, run unto the roots of the Teeth with a little Vein and Artery : this Cavity goes quite through the Jaw-Bone like a Pipe, so that a Copper Wire put in at one end, will come out at the other. § 4. *Its form is rough with Asperities and Cavities*, for the rising and insertion of Muscles. § 5. *It is moveable, and contains Sockets for the Teeth*, equal with the number of the Teeth, by whom they are enlarged ; and in old Age, when the Teeth fall out, the Sockets draw together, and become sharp.

VII. Of the Bones of the Teeth.

§ 1. *Odontes quasi edentes, Dentes quasi edentes dicuntur*: Teeth are Bones properly so called, white, smooth, hard and solid, being indeed harder than other Bones, that they might bite and chew hard things, not much inferior in hardness to Stones.

§ 2. *They are naked without any Periostion, least we should be pained in chewing*, yet endowed with a kind of Sence, as may be perceived by cold drink, or when they are on edge, or by chewing Grit or Gravel, which Sence is lodged in the inner, softer, and more Marrowy or Nervous part. § 3. *They receive into their*

Cavities Nerves, which other Bones do not, in which they are fixed by Gomphosis, as a Nail in a Post; and by which Nerves they are tyed first to the Mandible, with a Synneurosis ; but their upper part is compassed with the fleshy substance of the Gums, to which they are joyned by Syssarcoosis. § 4. *The Teeth continually grow, even all a mans Life, because they are daily worn by Biting and Grinding* ; and if a Tooth in either Gum be drawn, the Tooth opposite to it will in time so grow, as to fill up the vacuity left on the other side.

§ 5. *They break out of the Gums commonly in the seventh Month, sometimes later, after the Child is a year old* ; the upper for the most part sooner than the lower, yet in some the lowest soonest ; among which, first the Fore-Teeth, then the Dog Teeth, lastly the Grinders. § 6. *Children cast the Fore-Teeth or Cutters in their fourth, fifth, or sixth years* : the Dog-teeth about their seventh year, and their Grinders about their fourteenth year : if afterwards they come forth by any accident, they grow no more. If the Teeth shed not, the new Teeth will come out at new holes, the upper commonly on the out-side, the inner on the inside, like as new ranks of Teeth. § 7. *They are of three kinds, viz. Cutters, Dog-teeth, and Grinders.* § 8. *The Fore-teeth or Cutters called Incisores, Incisorij Cutters, γαδονοι, Gelásinoi. Laughing Teeth or Grinders, are placed before in the middle of the rest in each Jaw 4, broad and sharp, shorter than the Dog-Teeth, and fixed in their*

Ca-

Tab. VII.

The Skeleton or Bones of a grown Body.

- A. Os Frontis.
bb. Coronal Suture.
C. The Temple Bones.
d. Proceſſus Mammillaris.
E. Os Jugula.
F. Upper Jaw-Bone.
GG. Lower Jaw-bone.
hhh. Vertebrae of the Neck.
iii &c. The Coſtae or Ribs.
KK. Sternum or Breſt-bone.
LL. Clavicula.
MM. Inner ſide of each ſcapula.
NN. Os Humeri.
OO. The Joynting of the Humerus.
PP. Its joynting with the Cubit and Radius.
qq. Its inner knob.
rr. Its outer knob.
ss. Cubit Bone or Ulna.
TT. The other Cubit Bone or Radius.
uu. Proceſſus of the Ulna, called Olecranon.
xx. Leſſer proceſſus of the Ulna.
yy. Wriſt conſiſting of 8 little Bones.
ZZ. Metacarpus of four Bones.

aaaa. The Fingers.

ββ. The Thumb made of 3 Bones.

Bones in the lower part.

- Aaaaa. The five Vertebrae of the Loyns.
BB. Innerſide of the Os Sacrum.
CC. Cavity of the Os Ilii, a great part of the Pelvis, or Baſin.
DD. Os Coxendicis with its Acetabulum.
EE. Oſſa Pubis, with their holes.
F. A line joynting the Oſſa Pubis by help of the Thigh Bone. (a Griſtle.
hh. Round head of the ſaid Bone.
ii. The Neck thereof.
kk. Great Trochanter, or external proceſſus of the Neck.
ll. Other proceſſus, or leſſer Trochanter.
mmmm. The lower Heads of the Thigh-bones.
NN. The Mola, Patella, or Knee-pan.
OO. The Tibia, in which
pppp. Shews the two uppermoſt hollowneſſes.
rr. Shews the Spina.
ss. The lower proceſſus of the Ankle-bone.
TT. The Fibula, or Perone.
uu. Its lower part, making the extern ankle.
XX. The ſeven Bones of the Tarsus.

aa. The Aſtragalus.

β. The Calx, Calcaneum or Heel-bone.

γ. Os Cubiforme,

Bones of the Metatarsus.

YY. Bones of the Toes, 2. to the great Toe,

3. a peice to the other.

Fig. II.

- D. The Scapula or Shoulder-blade.
E. Its firſt proceſſus called Acromion.

- F. Its leſſer ſharp proceſſus called Coracoides.
G. Its ſhorter proceſſus, called Cervix.
hh. Baſis of the Shoulder-blade.
i. Its upper corner.
K. Its lower corner.

Fig. III.

- AA. The hind ſide of the Vertebra of the Neck.
B. The Tooth-like appendix or proceſſus.
C. The forked Spine.

Fig. IV.

- AA. The hind ſide of the Vertebrae of the Back.
B. The upper ſurface, full of holes.
CC. The tranſverſe proceſſes.
D. The hinder proceſſus or ſpine.

Fig. V.

- AA. The forepart of the Vertebrae of the Loyns.
B. Its lower Surface.
C. An hole for the Marrow.
DD. Tranſverſe or Lateral proceſſes.
E. The latter proceſſus of the Spina.
II. Its oblique proceſſes.

Fig. VI.

- AAAA. Hindſide of the Os Sacrum.
B. Hole for the Spinal Marrow.
CC. Oblique proceſſes.
ddd. The hindermore proceſſes.
eeee. Holes for the going out of the Nerves.
ffff. Hinder proceſſus which is forked.

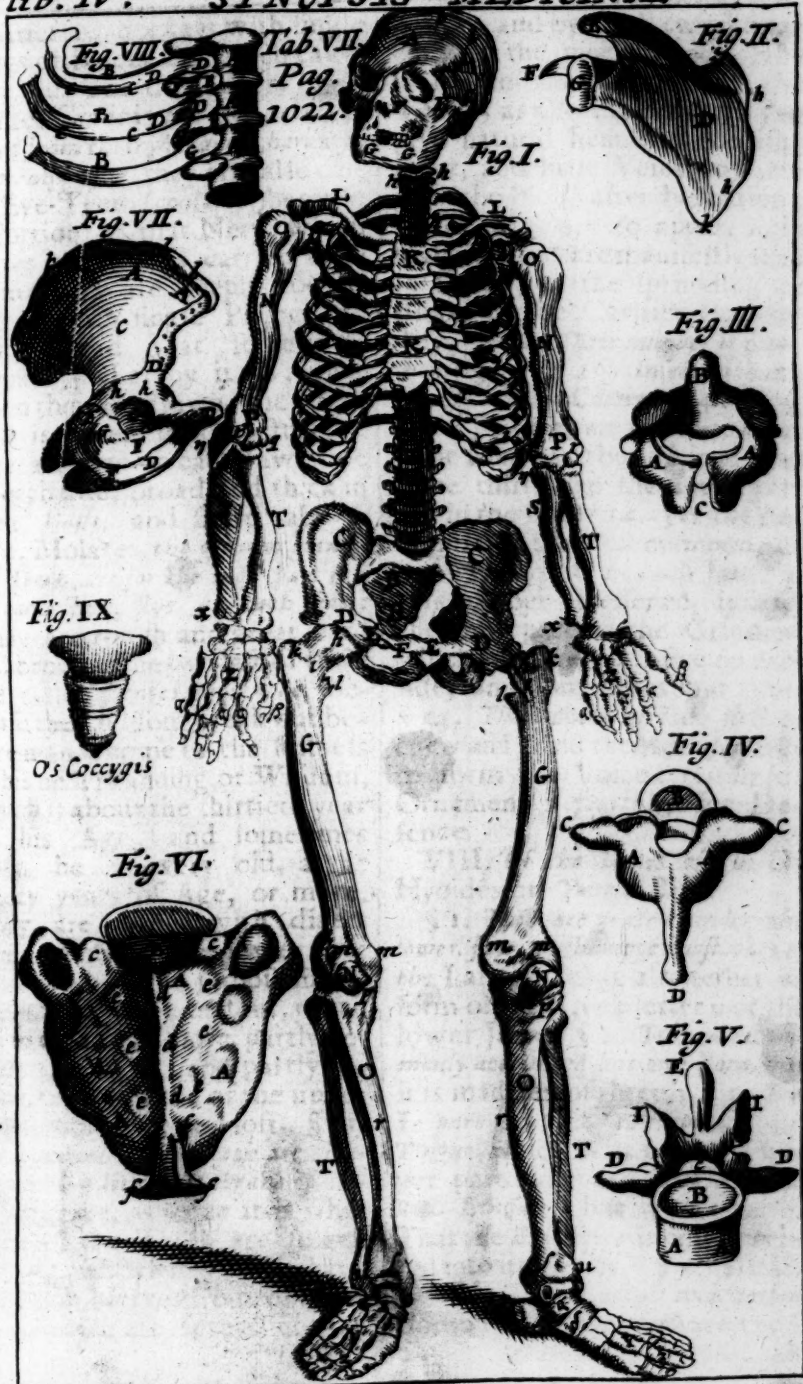
Fig. VII.

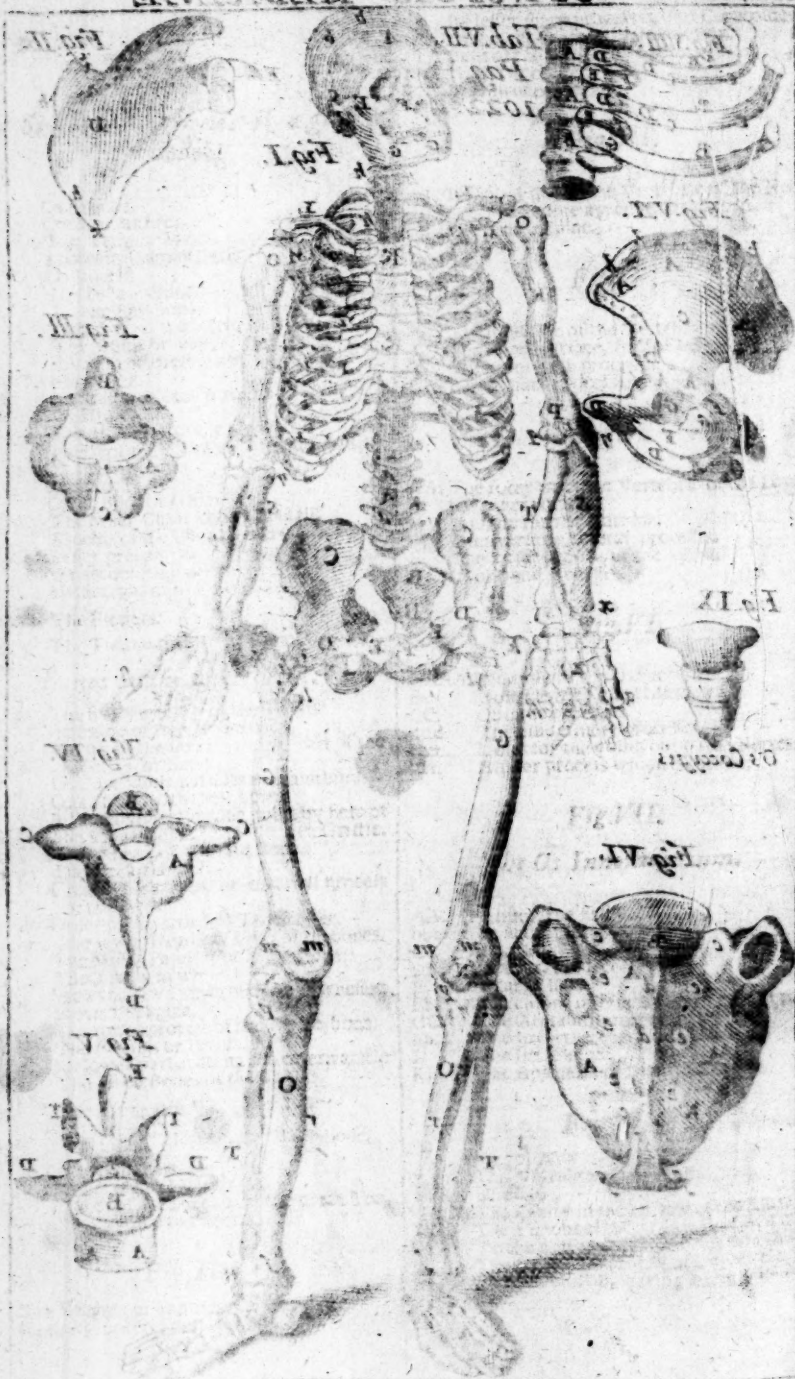
The Os Innominatum.

- AA. Os Ilium, the firſt part.
bbb. The Spine thereof.
C. Its back.
DDD. Os pubis, the ſecond part.
E. Its large hole.
FFF. Os Iſchium, or Huckle Bone, the 3d part.
GG. The Acetabulum or ſawcer.
hh. The brim thereof.
I. The little knob.
K. The Appendix of the Iſchium.

Fig. VIII.

- AAA. The Vertebra of the Pack.
BBB. The Ribs.
CCCC. The Cavity in the hollow of the Ribs.
DD. The 2 knobs of the Ribs, which joynt them.
E. To the hollowneſs of the Vertebra, and to
F. The tranſverſe proceſſus of the Vertebra.
G. The loweſt Rib, having a ſingle knob.





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Cavities or Sockets with single Snags or Roots, for which cause they fall out the sooner. § 9. *Dentes Canini, the Dog-teeth, so called from their sharpness, hardness, form, and use*: they are also called Eye-Teeth (*oculares*), because a Portion of that Nerve which moves the Eye is carried unto them: they are deeply rooted fastned with single Phangs or Snags, and that sometimes crooked, whereby it is, that when they are drawn, the Mandible is oftentimes fractured: they are two on each Jaw, one on each side, broad and thick in their Basis, and sharp above. § 10. *Molares, the great or grinding Teeth, are for the most part ten in each Jaw, five on each side*: They are rough and great, hard and broad: The two last of these are called *Dentes Sapientiae*, because they seldom break out before man is come to the fullness of his understanding, or Wisdom, which is about the thirtieth year of his Age, and sometimes when he is very old, as at eighty years of Age, or more. They are fastned with divers Snags: those in the lower Jaw with two or three; those in the upper with three or four, which are so many the more, partly because they hang; and partly because the substance of the upper Jaw is more rare and soft. § 11. *The Cavities of the Teeth are cloathed with a little membrane of exquisite sence, whence it is that pains of the Teeth are so exceeding vehement*: they have a little Nerves from our first, which are spread abroad

within, and by small twigs mixed with the mucilaginous substance in the middle of the Teeth; as also little Arteries to give natural heat and nourishment, and little Veins to carry back the Blood after Nutrition; which are not so apparent in mankind, but are manifestly seen in Oxen, as the sprinkling of Blood in the Cavities does testify. § 12. *Their number is commonly 32. viz. 16 in either Jaw, of which 8 are Cutters: 4 are dog Teeth; and 20 are Grinders*; but some Men have but 28 in all, and some thirty, in the upper Jaw 16. in the lower 14. yet the first number is the most common, viz. 32. which is 16 in each Jaw: if this number is lessened, it is for the most part in the Grinders, which are sometimes five on each side, and sometimes but four. § 13. *Their chief uses are first, to chew and grind the Meat: secondly, to form the Voice: thirdly, for Ornament: fourthly, for Defence.*

VIII. Of the Bones of the Os Hyoides or Tongue Bone.

§ 1. *They are seated under the lower Jaw, in the uppermost part of the Larynx, being altogether in form of the Greek letter v, of the lower Jaw.* § 2. *They are commonly accounted but one Bone, but it is made up of three.* § 3. *The I. part is said to uphold the Tongue, which rests upon the upper part of it, and is called the Basis Linguae: but Riolan saith, That the Epiglottis is only received into its Cavity.* § 4. *The II. and III. are lateral and called Cornua or Horns, and are tied to*

to the adjacent parts, partly by a fleshy, partly by a nervous substance. § 5. *The uses of these Bones are to keep the Throat open, both for the passage of the food in Swallowing, and for the receiving in of Air or Wind in speaking or breathing.*

IX. Of the Bones of the Ears.

§ 1. *The Bones of the Ears are the least of all, being the Bones subservient to hearing; and are four on each side; viz. Malleus the Hammer: Incus the Anvil: Scapes the Stirrup: and the Os Orbiculare: the first two were found out by Jacobus Carpus, the third by Fallopius, or rather by Ingrassias, the fourth by Franciscus Sylvius.* § 2. *They are all placed in the first Cavity with us (but with Riolanus the second) their substance is hard, and dense, but hollow within, that they might be lighter, and contain Marrow for their nourishment, but without any Periostion without them: they are as big in new born Babes as in grown Men, but not altogether so hard.* § 3. *I. Malleus the Hammer by its Apophysis sticks fast to the Membrane of the Drum, beyond the middle, like a Tail turned back, the Head of which is articulated into the Cavity of the Anvil, having a small Apophysis, that the Tendon of the Musculus Rotundus may be fastened thereto; and another process to which a Muscle of the External Ear is joyned: it rests it self upon the Boney Circle.* § 4. *II. Incus, the Anvil (almost like a grinding Tooth) lies under the Hammer, with two Apophyses beneath, the one shorter, resting*

upon the Os Squamosum, the other longer upholding the Top of the Stirrup, or Triangular-Bone. § 5. *III. Stapes or the Stirrup (so called from its Figure) has a round head, knit as aforesaid to the Anvil: it stretches out from its Head two Cavities, and a little Log, bowed like a Bow, with a very thin and porous Basis, lest any thing should stop the passage of the Sound. It rests upon the Cochlea, till it is sunk into the broad Basis of the Fenestra Ovalis, to which it is fastned by a loose Ligament: these three Bones are joyned with a very fine Ligament, which is stretched over the whole Membrane, as the strings over the bottom of a Drum.* § 6. *IV. Os Orbiculare, it is round and small, almost like Scales of a Pike-fish, joyned by a small Ligament to the Stirrup side, where it is joyned to the Anvil: you may easily find it in a boyled Calves-head.* § 7. *The uses of these Bones are to serve the sense of hearing: and to make a passage for the Excrements of the Ears: for the Stirrup shutting the Oval or upper Window, is moved by the Anvil (upon which the Window is opened that the Species of Sounds may pass into the Nerve;) and the Anvil being smitten by the Hammer, and the Hammer by the Membrane of the Drum, through the impulse of the External Air, the Membrane of the Drum is in the mean-while driven Inwards, whereby the inbred Air is affected, which wandering through the Cochlea, causes the branches of the Auditory Nerve to receive the*

the Species of Sounds, brought in by the Windows, and to communicate the same to the Brain.

X. Of the Bones of the Neck.

§ 1. The whole *Vertebræ* of the Back, from the *Cranium* or Skull to the *Os Coccygis* or *Crupper Bone* is termed *Spina*, the *Thorn*, because the hinder part of it is sharp pointed like a *Thorn branch*.

§ 2. The parts of the *Spine* are called *Σπονδυλοι* *Spondyloi*, in *Greek*, *Vertebræ* in *Latin*; and *whirl-Bones*, or *turning Bones* in *English*, because by their means the *Body* is turned several ways.

§ 3. All these *Vertebræ* are hollowed to contain the *spinal Marrow*; they are many, for the conveniency of motion.

§ 4. The figure is, sometimes inclining inwards, as the *Vertebræ* of the Neck, to sustain the *Gullet* and *Aspera Arteria*; and the *Vertebræ* of the *Loyns*, to uphold the *Trunks* of the *Aorta*, and *Cava* descending: sometimes

outwards, as the *Vertebræ* of the Back, and a little of the *Os Sacrum*; that there may be a larger space for the heart, lungs, Bladder, *Anus*, *Womb*, &c.

§ 5. The figure of each *Vertebra*, above and below, is plain and broad, that luxation may not easily be made:

round within, convex, and bunching out; but in the neck broader, and more even, because of the *Gullet* and *Wind-pipe* resting thereon: on the outward part or

back point the *Vertebræ* have many prominencies. § 6. In every *Vertebra* there are 3 kinds of *Apophyses*, first four oblique ones, two in the upper part ascending; and two in the neither part defending.

§ 7. Secondly, Two transverse ones,

for the insertion of the *Muscles*, which in the *Vertebræ* of the Neck are broad and bored through; in the back, thick, solid and round; excepting the eleventh and twelfth.

§ 8. Thirdly, One sharp one, in the hind part, which is only properly called the *Spine* or *Thorn*, and is wanting in the first *Vertebra*.

§ 9. These *Vertebræ* have five *Epiphyses*, two above and beneath at their *Body*; as many at their transverse *Apophyses*, and one at the extremity of the *Spine*:

they have also a wide hole in the midst, to contain the *Spinal Marrow*: and also lesser holes in their sides to let the

Nerves out: above and beneath they have thick and soft *Gristles*; that the *Body* may be the more easily moved: but in the *Os Sacrum* they are harder and dryer, because that *Bone* is im-

movable. § 10. They are knit together by that *Articulation* called *Ginglymus* in the hinder parts: but by *Symphasis* with very strong

Ligaments, in the Fore-parts. Now these *Ligaments* are twofold; first, such as do knit the *Vertebræ* above and beneath, in shape

like an half Moon, thick, strong, fibrous, and mucous: 2ly, such as arise from the *Epiphyses*, both the transverse and spinous, which are

membranous, and by which the *Apophyses* are more firmly tyed.

§ 11. These *Bones* of the *Spina* are divided into seven *Vertebræ* of the Neck; twelve of the Back, five of the *Loyns*; and six (for the most part) of the *Os Sacrum*: to which add the *Crupper Bone*, or

Coccyx. § 12. Of these seven *Vertebræ* of the Neck, some have their

transverse processes cleft in two: also they have them bored for the Cervical Veins and Arteries, ascending into the Brain; and their Spine is, for the most part Cloven. § 13. The first Vertebra is called Atlas, because it seems to bear up the Head, that rests upon the two hollows thereof: it is joyned to the hinder part of the Head by Ligaments, that they may stick most close together; and is without Spine, least two small Muscles of the Head (arising from the second Vertebra) should be hurt: It also receives the following, but is not received. § 14. The second Vertebra is called Epistropheus, from Turning: for out of its Body arises an Epiphysis (or as some will have it an Apophysis) round and oblong, like a Dogs Tooth, about which the Head of the first Vertebra is turned; this luxated, causes an incurable Quinsey: from the rough Surface of this Tooth proceeds the Ligament by which it is bound to the Occiput, about which is wound a solid and round Ligament, like a Nerve in shape, and wonderous artificially twisted, that the marrow may not be compressed or hurt: this Epistropheus is joyned to the Atlas, by a broad Ligament turned round. § 15. The third Vertebra is called Axis: this with all the rest of the Neck, which want names, do in a manner agree with the Vertebrae of the Back; of which we shall next speak in order.

XI. Of the Vertebrae of the Back.

§ 1. These are in number twelve, to which as many Ribs answer for the most part, for seldome does

one abound, and yet more seldome is one wanting. § 2. These Vertebrae are round on the Fore-part, but behind somewhat hollow: they have four oblique processes, serving for strong Articulation; two lateral; and one sharp behind not divided: they have also two hollownesses, on each side one, lined with a Cartilage to receive the Tops of the Ribs. § 3. They are thicker than those of the Neck, less solid, and full of little holes, for the passages of the nourishing Vessels. § 4. The first Vertebra of the Back is called λiphia, Liphia, because it is higher and sticks out more than the rest: the second Μασχάλισις, Maschalister, Axillaris, the Armpit Vertebra: the next eight πλυσταί, Costales, the Rib-Vertebra: The eleventh ἀρρηπτοί, Arrheptoi, because its Spine is straight: The twelfth Διαρυστήρ, Diaryster, præcingens, the Girdler. § 5. Now this is to be noted, that the twelfth Vertebra is not joyned as the rest by Ginglymos, but by Arthrodia, wherefore extending, bending, & turning are performed thereby.

XII. Of the Vertebrae of the Loins.

§ 1. These are five in number and belong to the Abdomen or lower Belly: they are thicker and greater than those of the Breast, because they uphold them, and the lowermost are biggest. § 2. Their figure is long and semi-circular; their substance spongy, like pumice stone, and full of holes to give passage to the Veins; their connexion is looser than that of the Back, that we might the more easily stoop to the Ground. § 3. The transverse processes are longer

longer but thinner, than the former excepting the first and fifth: the upper processes are hollow, the lower knobby: the hinder processes are very strong, but shorter, thicker, and broader, to which the Muscles and Ligaments of the Back are fastned.

§ 4. In the back part there is a rough hollownesse to receive the Os Ilium; in other things they agree with the former. § 5. The first is called *vertebræ*, Nephrites, from the Kidneys which rest thereupon: the last is called *asphaltites*, the under-propper.

XIII. Of the Os Sacrum, or Holy Bone.

§ 1. It is so (called not from any holiness more in it than in other Bones, but) from its magnitude, it being common with the Greeks to call all great things *Sacra*, or holy things, and so in England, if a thing be great, we commonly call it a good thing, as a thing of a good or great bigness. § 2. It is broad and immovable, being the Basis or Foundation of the Back, upholding the whole frame of the Vertebrae. § 3. In Infants it is commonly composed of six Bones united by a Cartilage, but in men of ripe years it seems but one Bone, at the first view, yet being divided for a long time in Oyl, it is divided for the most part into six several Vertebrae: for each of them has a Body, and processes, and has a large hole to receive the Spinalis Medulla. § 4. But in this they differ from the other Vertebrae, because in those the lower is the bigger, but in these the lesser; wherefore, the uppermost is the biggest, and the

lowest the least. § 5. Its figure is almost triangular: in its fore-part hollow, smooth, and even; in its hinder part, bunching and rough, with little holes to send out Nerves; the oblique processes can hardly be discern'd, except in the first, the transverse are long, but so united, as that all seem but one: the lowermost has no process, but only a round bunching out. § 6. In the three upper are large Cavities ending out, to which the Os Ilii adhere.

XIV. Of the Os Coccygis, the Crupper or Rump Bone.

§ 1. This is under the former, consisting of three Bones and two Gristles; and is called Os Coccygis, the Cuckoos Bill, from the likeness thereof. § 2. It is joined by a Cartilage; for the first Bone of it has a small hollownesse, which receives the last Vertebra of the Os Sacrum. § 3. Of these three Bones, the lower is still the lesser: and in Men, they are bent inwards to stay the straight Gut, and the Sphincter Muscle which are tyed to it: but in Women they bend outward, to give way to the Womb in the time of Travel. § 4. These Bones are of a springy and soft substance, and have neither process nor any hollownesse. § 5. Their union with the Os Sacrum is loose, to give way for the Exclusion of large Excrements; for otherwise a Luxation might happen, causing exceeding great pains; as in hard labour it sometimes falls out.

XV. Of the Os Iliacominatum, or Coxa, the hoop Bone or Flank Bone.

§ 1. It consists of three Bones, to wit, 1. Os Ilium. 2. Os Ischium, or Coxendicis. 3. Os Pubis, or

Pectinis; all which are joyned together by Gristles; till about the seventh year: afterwards, especially in those of ripe years, the Cartilages being dryed, they seem to be but one Bone. § 2.

These three bones together with the Os Sacrum, make that Cavity, which is called Pelvis, the Basin or Bowl, which is bigger in a Woman than in a Man, that the Womb of a Woman with Child may the better rest upon it.

§ 3. *In hard labour the Share-Bone or Os pubis, and the Os Sacrum, will part, the Cartilages and Ligaments, (being bedewed with superfluous humidity) giving way.*

§ 4. I. Os Ilium, the Huckle Bone, so called because it contains the Gut Ilium, is the first part, the higher, the broadest, and the greatest, in figure, semi-circular, arched without, and hollow within: the Semi circle is called Spina, the Arched part Dorsum, and the hollow part Costa. § 5. II. Os pubis or Pectinis, the Share Bone;

is seated in the forepart; and is parted in the middle by a Cartilage not very hard: It is joyned to the Bone of the other side by Synchondrosis, which in Women is twice as thick and as wide as in Men, that these Bones in Child-bearing may not be luxated or disjoyned, but only loosned and made to gape at the time of the coming forth of the Child; now if the Child be very great, the Share-Bones are also pulled aunder, as appears by the Authoritys of Paræus, Riolanus, and Bartholinus. These Share-Bones though joyned by a Gristle, have also two Ligaments: the first of

which is compassed about Circularly: the second is membranous which possesses the hole. § 6 III. Os Ischion, Os Coxendicis, The Hip-Bone: this is the lower and more outward part, wherein is a large and deep Cavity, called Acetabulum, the Sawcer, or Pixis, the Box, which receives the large Head of the Thigh-bone: the Cartilaginous process of this Cavity is called Supercillum the Brow. This Coxendix is placed between the Huckle and Share-Bones, and is knit to the Os Sacrum by a double Ligament; growing out of the Os Sacrum: the one is inserted into the sharp process of the Hip; the other behind, into its Appendix, that the Intestinum rectum, and its Muscles may be sustained.

XVI. Of the Costæ or Ribs.

§ 1. As the Os Coxæ is at the side of the Os Sacrum; so are the Ribs at the Vertebrae of the Back, being the lateral parts of the Thorax. § 2. They are called in Greek πλευραι, in Latin Costæ, and form the sides: in Figure they resemble a Bow, or Segment of a Circle; their original from the Vertebra is narrower and rounder, growing broader as they come to the Brest: in their upper sides they are blunt, and thick: in their under part, sharp and thin: the uppermore Ribs are more crooked and shorter: the middlemore are longer and broader: the lower are cut again shorter. § 3. Their substance is partly Cartilaginous, and partly boney, the boney part being towards the Vertebra: where they are furnished with two little Apophyses

pophyses or knobs : the first of which is articulated with the hollow of the *Vertebra* : the second is joyned to the transverse process of the *Vertebra* : but the five lower Ribs are joyned by a simple knob. § 4. *The Ribs in the forepart have Gristles like Epiphyses, which in Women (seldom in Men) through length of time do grow as hard as Bones* : the Gristles of the upper Ribs are harder, because they are joyned to the *Sternum*, those of the lower are softer, because they are joyned to the Gristles : they have also Gristles in their Articulation with the *Vertebrae*.

§ 5. *The number of the Ribs are twelve on each side : seldom thirteen, more rarely eleven : and when they are so found, you may account their numbers either supernumerary or deficient.* § 6.

They are two-fold, viz. either Genuine, legitimate, and true : or bastard, illegitimate, and false.

§ 7. *The true or legitimate are the seven upper Ribs, because they touch the Brest-bone by their length, and make as it were a Circle : they also make a perfect articulation with the Brest-Bone, and with the Vertebrae by a double knob, as we hinted before.*

§ 8. *The two highest are called *zygopoi*, Retorta, turned backwards : the two following are called *sepea*, Solide, the solid Ribs : the three remaining Ribs are called *sepevrides*, pectorales, the Brest Ribs.* § 9. *The illegitimate or bastard Ribs, are the five lower Ribs, which are shorter, lesser, and softer, not reaching to the Brest-bone ; they are semi-circu-*

lar and arched without ; hollow within : they terminate into longer Gristles than the true Ribs, which being turned back upwards, do stick one to another, as if they were glewed together, the last excepted, which is the least, and sticks to none : the upper more and lower more are the shortest ; the middle the longest.

§ 10. *The eleventh Rib, and sometimes the twelfth are tied to the *Septum transversum* : and sometimes the last grows to the *Obliques descendens Muscles* of the Belly, without the Midriff ; or has the Circumscription of its proper Muscle.* § 11. *The use of the Ribs is to defend the Brest and the Heart, Lungs, and other Bowels therein contained ; as also to help the motion of the Brest and parts adjacent, in sustaining the Muscles & fleshy parts thereof.*

XVII. *Of the Sternum or Brest-bone.*

§ 1. *Sternum, Os Pectoris, the Brest-bone, is placed upon the forepart of the Chest, and rests upon the Ribs ; it is called Os Gladiale, Os Epistiforme, the Sword-like Bone, being in the shape of such a Sword as was used by the Ancients.*

§ 2. *Its substance is partly boney, but spongy and red ; partly gristly ; its Figure is Convex, broad, and long.*

§ 3. *It is composed of three Bones, as may be seen in young people, but in old men it commonly appears but one ; they are distinguished by transverse lines, and are knit together by *Synchondrosis*, for Gristles are interposed like Ligaments.* § 4. *The I. and uppermost Bone is the broadest and thickest, plain, but un-*

even, or not smooth; and almost like a half Moon above, called by some *Jugulum* the Throat-pit, by others *Furculam* the little Fork. It has in the upper part on each side a Sinus or Cavity, lined with a Cartilage to receive the Heads of the *Claviculae*. § 5. The II. and middlemost Bone, is neither so thick nor so broad, yet four times as long, with Cavities on each side, to receive the Cartilages of the third, fourth, fifth, and sixth Ribs. § 6. The III. is least of all, yet broader than the former, to the lower part of which it is joyned. It ends in the Gristle called *Epiphysis*, *Xiphoides*, *Enformis*, *Cartilago Mucronata*, The Sword-like, or pointed Cartilage: but the common name is *Scutiformis*, or Shield-fashioned. Its figure is Triangular and oblong: sometimes round at the end, and sometimes broad: also sometimes perforated for the Dug-Veins and Arteries which are accompanied by a Nerve. Under this is the Pit of the Stomach: where the upper and left Orifice is, called *Scrobiculus Cordis*, or *Fovea*. § 7. The use of the Sternon is, first to defend the Heart (like a shield) from outward dangers: secondly, to uphold the *Mediastinum*: 3ly, to collect and fasten the Ribs.

XVIII. Of the *Claviculae*, The Channel or Collar-Bones.

§ 1. The Collar-Bones, being in number two, are called *Exades*, *Claviculae*, *Keys*, because they shut up the Breſt or Thorax; and as it were lock the *Scapula* or Shoulder-Blades to the Sternon. *Celsus* calls them *Fingula* & *pericula* from joynings, others call them *Ligulae*,

Os furcale, *furcalem superiorem*. § 2. Their figure is like that of a great Roman S. They are situated cross-wise, under the lower part of the Neck, on the top of the Thorax on each side: externally, they are Convex, on the inside a little Concave: Their substance is thick, but fistulous and spongy, and therefore easily broken: their superficies is rough and uneven. § 3. They are joyned to two Bones; to wit, to the upper process of the *Scapula* (by a Cartilage, but not growing there, whence also by a Ligament embracing the joynt it is detained) with a broad and longish Head: and to the Sternon by another little Head as aforesaid. § 4. Their use is to assist in the various motions of the Arms; as also to uphold the Shoulder-Blades, that they should not fall upon the Breſt, together with the Shoulder-Bone: moreover the Bone of the Arm rests upon this Bone, as upon a prop, that it may be the more easily moved upwards and backwards. Hence Bruits have no Collar-Bones, the Ape, Squirrel, Hedgehog, and Mouse excepted.

XIX. Of the *Scapulae* or Shoulder-blades.

§ 1. *Omo-artn*, *Omoplatee*, *Scapula*, the Shoulder-Blade, is a broad and thin Bone, chiefly in the midst, having thick Apophyses, on each side one, resting upon the upper Ribs, behind like a Shield. § 2. Its substance is hard and solid; its figure almost triangular; the outside somewhat arched, but the inside hollow. It has also a spine or sharp point, looking both above and beneath the Cavities called *Inter-*

Interſcapula. § 3. It has three proceſſes, 1. the extreame part of the Spine, called *Angulus, Acromion, Summit* or *Muco humeri*, the Shoulder-Tip, by which it is joyned to the *Clavicula*. § 4. II. *Keckenſide*, *xy. dy. uegeids*, *xy. Zryuoids*, *Caracoides*, *Anchyrodes*, *Sigmoïdes*, the Ankor or Crows bill-like proceſs, leſs than the former, by which the Shoulder Bone is contained in its place. § 5. III. *Avyn*, *Cervix*, the Neck, in the end of which is a ſuperficial Cavity, where-into the Head of the Shoulder is inſerted, which that it may not ſlip out, the deepneſs of the Cavity is increaſed by a thick Griſtle encompassing the Lips; by this proceſs the Shoulder-blade is joyned to the Arm. § 6. It is joyned to ſeveral parts by *Syſſarconis* or *Concarnation*, by means of the Muſcles: to the Occiput by the *Cucullar Muſcles*; to the *Vertebra* of the Neck, by the ſecond pair of them; and to the Back, by the Muſcle *Rhomboides*. § 7. In the inſide of this Bone, about the middle there is a hole, by which a Vein doth paſs for nourishment of it. § 8. It has five Epiphyſes, three at the inſide, and two at the Baſis: it has alſo Ligaments, which joyn its Head to the *Humerus*, and the *Acromion* or Shoulder to the *Clavicula*; and common, thin, and membranous Ligaments which compaſs the Joynt of the Shoulder-blade and Arm. § 9. Its uſes are, 1. to ſtrengthen the Rib. 2. For the Articulation of the *Humerus* and *Clavicula*, (hence the Shoulder is ſeldom diſlocated either upwards, or to either ſide, but for the moſt part down

wards.) 3. For the Inſertion of the Muſcles. 4. To cover the Heart, and defend the Back from being hurt.

XX. Of the *Humerus*, *Adju-torium*, Os *Brachij*, the Shoulder Bone, or Arm Bone.

§ 1. Os *Brachij*, or Bone of the Arm, called alſo the *Shoulder Bone*, is but one, great, ſtrong, long, roundiſh, and uneven. § 2. Its ſubſtance is hard and ſolid; it is hollow all along within, containing marrow, but at the two ends more broad and a little ſpongy. § 3. In its upper part it has an *Appendix*, *Epiphyſis*, of great head growing to it, which is round, covered with a Griſtle, and articulated with the *Scapula* by *Diarthroſis*. In the Top of it, is alſo a long Chink, through which the nervous head of the *Muſculus N. cepi* doth paſs. § 4. In the lower end you ſhall obſerve a Pulley, about which the *Ulna* is turned: this lower part is articulated to the ſaid *Ulna* and *Radius*, where there are two *Apophyſes*: an external which is leſs, and cruſted with a Griſtle: and an internal having two Cavities, repreſenting a Pulley, as aforeſaid, with which the *Cubiti* is joyned by *Ginglymus*, ſo that it may be bent to a moſt acute Angle, but not extended beyond a right line. § 5. About the middle of this Bone in the inſide, you may perceive a hole, through the which a Veſſel doth paſs, to carry nourishment to the marrowy ſubſtance.

XXI. Of the *Cubiti*, or Elbow Bones.

§ 1. The Bones of the *Cubiti*, or Elbow are two; the leſſer above

called *Radius*, and a larger below called *Ulna*. § 2. They are shorter than the Shoulder, have *Epiphyses* on either side, and resting mutually one upon another, are joyned one to another by a membranous Ligament: above, the *Ulna* receives the *Radius*, but below, the *Radius* receives it.

§ 3. Their substance is firm and solid, are both long, and contain a marrowy substance: but their Surface is somewhat rough, by reason of the Lines appointed for the Muscles. § 4. I. *Cubitus*, *Ulna* or *Elk*, called by barbarous Authors *focile majus*, the greater *focil*, is larger above, where it is articulated with the *Brachium* by *Ginglymus*, and therefore hath both *Apophyses* and *Sinus*. § 5. The *Apophyses* are two, shaped in length almost triangular: and rough, that the Ligaments may strongly close upon the Joynt, and compass the same, fast, they are called *apophyses*, *Coronae*, beaks, or bills: the uppermost is less, and goes into the hollow of the *Brachium*: the lower is thicker and larger, and ends in an obuse Angle in the hinder Cavity of the *Brachium*: This is that which *Galen* calls *ὀλεκράνον*, *Olecranon*, and *Hippocrates* *Ἀγκύρα*, *Ancona*, in Latin *Gibberum*, the tip of the Shoulder, on which we lean. § 6. In its lower part it is articulated with the Wrist, both by a Gristle going between, and by an acute process called *Styloides*, Bodkin-like, whence a Ligament arises which joyns the *Ulna* to the Wrist-Joynt. § 7. II. *Radius* the upper and lesser Bone, called also *focile minus*, is more oblique or crooked,

being a little distant from the other in the middle, where a thin Ligament comes between: the upper part of it is articulated with the outward part of the *Brachium* by *Diarthrosis*, whence comes the forward and backward motion: the lower is articulated with an *Epiphysis* at the Wrist-Bone.

XXII. Of the Carpus or Wrist-bones.

§ 1. *Carpus* the Wrist hath eight distinct Bones, called *Avaryna*, or without name, all of them unequal, and differing in shape and magnitude. § 2. At first they are Gristles, afterwards spongy bones, covered with very strong gristly Ligaments, which so fastens them together, as if they were but one Bone: these Ligaments arising from the lower processes of the *Ulna* and *Radius*, serve for articulation. § 3. But there are Angular or Ring-shaped Ligaments, which are transverse, and compass the Wrist, to comprehend strengthen and safely carry the Tendons which pass through the *Carpus*: these are many, though they seem to be but one Ligament, the internal comprehend the Tendons of the Muscles which bend the Fingers: the external, the Tendons of the Muscles which extend them. § 4. These Bones of the Wrist are disposed into two orders or rows: four above, which are articulated with the *Ulna* and *Radius* by *Arthrodia Diarthroides*; of which the fourth is the least, and placed under the little Finger: and four are beneath, joyned by *Harmonia* (because their motion is

obscure: these are knit to the four Bones of the Metacarpus or after-Wrist by *Artbrodia Synarthroides*.

XXIII. Of the Metacarpus, after-Wrist or Palm of the Hand.

§ 1. *Metacarpium*, the Palm of the Hand has four Bones, of a hard and solid substance and hollow, containing Marrow; they are round, and bigger than those of the Fingers; that which answers to the Fore-finger is biggest, and so still the lower-more are lesser. § 2. They are joynted to the Wrist by *Synarthrosis* with gristly Ligaments; and to the Finger by *Ginglymos*. § 3. Between each Bone a distance is left for the *Musculi Interossæi* of the Fingers; and in the Palm there is a transverse Ligament, which tyesthe Bones of the Fingers to the *Metacarpium*. § 4. Above and beneath they have *Epiphyses*: by the upper (which has a Cavity,) they are joynted to the *Carpus* or Wrist; by the lower next the Fingers, (which are with long and round Heads, covered with Cartilages) they enter into the hollowness of the Fingers.

XXIV. Of the Bones of the Fingers.

§ 1. The Bones of the Fingers are in number fifteen, each of them having three Bones, and answering the Bones of the *Metacarpus*, the Thumb excepted. § 2. The Thumb has no connection with the Bones of the *Metacarpium*, because it is articulate with the Wrist by *Diartrosis arthradialis*, with a manifest motion, whereas the Bones of the Palm are joynted to the Wrist without manifest motion;

as also because the upper of the Thumb is shorter than the Bones of the *Metacarpium*, and not answerable to them. § 3. The row of fingers are called in Greek *Phalanges*, because they resemble a rank of Soldiers in Battle array. § 4. Each of these Fingers are joynted by *Ginglymos*, and so they only stretch themselves out, and pull themselves in: their oblique motion depends upon the *Enarthrosis* of the first Bone with the *Metacarpus*. § 5. Each Finger has Ligaments on their insides, according to their length, like Channels, whereby they are fastned one to another. § 6. The magnitude of the Bones of the Fingers is various: the first Bones are greater than the second; the second than the third; which are all thicker at the *κόνδυλοι*, *Conduloi*, *nodi*, knots or joynts, which without are bunching, but within hollow or plain. § 7. They have *Apophyses* both above and beneath, except the third *internodia*, which towards the Nails need them not. § 8. To these you may add the *Sesamoidea* which are for the most part 12. in each hand, of which in their place.

XXV. Of the Bones of the Thighs.

§ 1. *Femur* (à ferendo dictum) The Thigh has but one Bone which is the greatest and longest in the whole Body. § 2. In its superiour extremity the Head is round, to which a slender part is added called the Neck: from the Neck are two *Apophyses* produced, to which the Muscles called *Rotatores* are fastned, and therefore they are called *Trochanters*, to these *Bartholine* adds a third made

made of an *Appendix*, which is inserted into the *Acetabulum* of the *Coxendix*. § 3. The uppermost which is the greater and external, is called *Trochanter* or *Rotator magnus*, the great Whirler or Wheeler about, having hollows, impressions and lines. § 4. The hindermost, which is the lesser and internal is called *Trochanter*, *Trochanter* or *Rotator parvus*, the lesser Wheeler about. § 5. The third *Apophysis* is a great round head made of an *Appendix*, inserted into the *Acetabulum* of the *Coxendix*, as aforesaid, and is by a double *Ligament* fastened into the said *Coxendix* or *Hip-Bone*: the one *Ligament* is common, broad, membranous, and indifferent thick, encompassing the *Joynt*: the other is round (like a *Cartilaginous Nerve*) which is between the Head of the *Thigh* and depth of the *Cavity*, lest the Head of the *Thigh* should slip out. § 6. The lower part of the *Thigh* has two low prominencies or *Head*, called *Condyls*, a *Cavity* being left between of a *Thumbs* breadth, through which the *Vessels* do pass with a *Nerve* of the fourth pair, which *cavity* also admits the middle and eminent *Apophysis* of the *Tibia* or *Legg*: In like manner the *Condyls* are received by the *Cavities* of the *Leg*, by a loose *Articulation* called *Ginglymus*: the inner of these *Heads* is more thick, the outer more broad and flat. § 7. The upper part of this *Articulation* is called the *Knee*, the hindermost the *Ham*.

XXVI. Of the *Patella* or *Knee-Pan*.

§ 1. *Patella*, *Rotula*, *Mola*, *Scutum*, *Os Scutiforme*, the *Knee-Pan*, is somewhat round, almost like a *Milstone*, about two inches broad, plain, without having many holes, but within bunched, and there covered with a *Cartilage*. § 2. Its substance in young Children is *Cartilaginous*, but in grown persons *boney*: its *Figure* is almost like a *Buckler* or *Shield*: its situation is upon the *joynting* of the *Thigh* and *Legg*, where the *Knee* is compassed with a membranous *Ligament*, the *Patella* excepted. § 3. It grows so, and is fastened by certain thick *Tendons* of some *Muscles* of the *Thigh*: as the second, third, and fourth *Muscles* which extend the *Tibia*, and pass by the *Knee* to it, and are inserted into the fore-knob of it. § 4. Its use is taken from its situation, being set before the *Thigh-Bone* and *Tibia* to strengthen the *Articulation*, lest the *Thigh-Bone* in going down any *Hill* should slip out forwards: as also to defend the *Tendons* of the *Muscles*. § 5. Behind there are two *Sesamoidean Bones*, tied to the two beginnings of the *Gemelli*, or first *Muscle* which moves the *Foot*. § 6. Great Wounds of the *Ham* are for the most part mortal, by reason of the great *Vessels* which pass that way.

XXVII. Of the *Bones* of the *leg*.

§ 1. *Tibia*, the *Shank* or *Legg* is composed of two *Bones*: the one being the inner and the greater is called *Tibia*, *crurus*, *canna major*, and *focile majus*. The other is the *Perone*, *Fibula*, the *Burton*, *canna minor*, *focile minus*. § 2. I. *Tibia*, the *Shank Bone*, it has in its

its upper part a process in the middle, which is received by the cavity of the Thigh-Bone: and two Cavities framed long-wise for the Heads of the Thigh-Bone; The depth of these hollows is increased by a Cartilage (fastned there to by Ligaments) which is soft, slippery, and bedewed with an Unctuous humor, which Gristle is thick in its Circumference, and thin towards its Center, therefore called *Cartilago Lunata*.

§ 3. It is joyned to the Thigh-Bone by *Ginglymos*; the *Fibula* only cleaves to the *Tibia*, and touches not the Thigh-Bone.

§ 4. It is not round, but rather Triangular having three lines, of which the foremore, (which is sharp and long, almost like the edge of a Knife) is called *Spina*: but of the hindermore, the inward is blunt the outward somewhat sharp. § 5. In the lower part there is an *Apophysis* void of flesh, sticking out with a bunch near the Foot, which is called *Malleolus internus*, the inner Ankle-bone; as the process of the *Fibula* is called *Malleolus externus* the outward Ankle-bone.

§ 6. II. *Perone*, *Perone*, *Fibula*, the Button (because it seems no Button together the Muscles of the Shank;) which is also called *Sura*, the Calf; is a firm Bone, (but smaller and more slender) and three-square likewise as the former, being drawn along before the *Tibia* without, as the *Radius* before the *Cubitus*. § 7. The upper end with its round Head sub-
sists beneath the Knee; but with its hollowness (lined with a Cartilage) it receives the lateral

knob, which is under the *Epiphysis* in the upper end of the *Tibia*.

§ 8. In the middle there is a distance between the *Tibia* and *Fibula*, in which space, is a thin, broad Ligament, joyning these Bones in longitude, and where also the Muscles of the Feet are placed. § 9. The lower end of the *Fibula* becoming sharp has an *Epiphysis* which growing thick, produces the *Apophysis* called *Malleolus externus*; or outward Ankle-Bone, which is lower than the inner Ankle-Bone.

XXVIII. Of the Bones of the Tarsus, or Instep.

§ 1. The Tarsus has seven Bones, I. *Asphaloides*, *Astragalos*, *Talus*, *Os Balistæ*, *Quatrio*, the Game-Bone; to which are joyned the great and small *Focile*: in the upper part, it is Articulate with the *Tibia* by *Ginglymos*; and so below with the Heel-bone: at the sides it receives on each hand the Ankle-bone: it is also joyned with the *Scaphoides*, or *Os Naviculare*: also to the Heel with a double Joynt, where its lower part is uneven, twice hollowed & thrice bunched out. § 2. II. *Pterna*, *Calc*, *Calcaneum*, *Pedus Calcis*, the Spur of the Foot, or Heel bone, into which the greatest and strongest Chord or Tendon in the whole Body is inserted; being made up of the Tendons of three Muscles of the Foot; this lyes under, and is articulated with the *Talus*; below it is received by the *Os Cubiforme*, with its flat head. § 3. III. *Exapodes*, *Scaphoides*, *Os Naviculare*, from the likeness of a Boat: it is long, bunched without, hollow within, and covered with

a Cartilage: it is knit to the *Talus*, and the three hindermore Bones.

§ 4. IV. *Πολύμορφον*, *Polymorphon*, *Os Tesseræ*, *Grandisnolum*, *Cuboides*, the Cube or Die-shaped Bone, because it hath six sides; it is greater than the rest, and placed before the Heel: in the forepart it is joyned to the fourth and fifth Bone of the *Metatarsus*: in the hinder with the Heel-Bone; the other sides are joyned to no Bones, but are free. § 5. V. VI. VII. These three are called *Cuneiformia*, *Calcoidea*, the Wedg-like Bones, or Bones of the Foot, and are articulated with the *Scaphoides* or *Os Naviculare*: above they are broad; but below they are narrow: being joyn'd they represent a vault: for above they are convex, beneath hollow, to receive the Tendons and Muscles: none of these touch the ground, being prevented by the *Cuboides*. The first is the greatest, wedg-like, and seated in the inside of the Foot: the middlemost is the least: and the third in a mean proportion.

XXIX. Of the Bones of the *Metatarsus*.

§ 1. The *Metatarsus* or Sole of the Foot has five Bones, which are solid without, hollow within, longer than the Bones of the Back of the Hand, and knit to the Bones of the *Tarsus*. § 2. That which stays the great Toe is the thickest; that which stays the next Toe is the longest: the next is shorter: and the rest each shorter in order. § 3. The lower end of that which stays the great Toe, is received by the *Cuneiforme majus*: the second by the *Cuneiforme minus*: the third, by the third Wedg-

like Bone: the other two, by the two Tops of the *Os Cubiforme*.

XXX. Of the Bones of the Toes.

§ 1. The Bones of the Toes are in number fourteen: The great Toe has only two, the rest three a-piece. § 2. They are solid without, hollow within; and have three Joyns and two Processes, answering in all things to the Bones of the Hand. § 3. The lowermost joyns have two Knobs, received by the ends of the middlemost Joyns, but the uppermost receiveth: the uppermost Joyns have also a deeper hollowness, because they receive the ends of the Bones of the Foot. § 4. To these add the *Sesamoidean bones*, seated as in the Hand, being for the most part twelve in number; two of which are in the second Joyn of the Thumb, to strengthen the Tendon of the Muscle which bends it.

XXXI. Of the *Sesamoidean Bones*.

§ 1. These are certain little Bones called *Sesaminia* or *Sesamoidea*, being almost like to *Sesamus Seeds*, both in form and magnitude; being for the most part in number fifty eight. They are round and a little flat, and lesser in the Feet than in the Hands, excepting those in the great Toe. § 2. They are most commonly twelve in each hand, or twenty four in both Hands, and so many in each Foot: yet they are sometimes more and sometimes less, as ten, sixteen or twenty in each Hand or Foot. § 3. They are situated on the inside of the Hand (none without says *Riolan*;) in the second Joyn of the Thumb there are two: the first and second

cond Joynt of the Fore-fingers have each of them one : the rest have two in first Joynts ; the middle and ring-fingers one in their second : after the same manner they are scituated and numbred in the Toes ; of which those two in the first Joynt of the great Toe, are most remarkable : they grow to the Tendons of the Muscles which moves the Toes, under which they lye, wrapt up in the Ligaments, and come away in cleansing the Bones, unless great Care be used. § 4. To these you may add others, as I. Two Bones which are placed against the *Os Cubiforme*, one in each Foot. II. Two bones in the Heads of the *Gemelli*, which are four in all. III. One Bone in the out-side of the Hand, by the Joyning of the eighth Bone of the Wrist, with the Bone of the *Metacarpus* sustaining the little Finger, which are two in both Hands. IV. One Bone in the out-side of Foot, by the joyning of the fifth Bone of the *Metatarsus*, which sustains the little Toe, with the *Os Cubiforme*, which in both Feet make two. § 5. The uses of these *Sesamoidean* Bones are, To defend the Tendons : To strengthen the Joynts, and preserve them from Luxation : and lastly, to fill up the empty spaces.

XXXII. An Ennumeration of all the Bones in mans Body.

§ 1. In the Head there are 8. in the Upper Jaw 11. in the lower Jaw 1. in the Tongue 3. the Teeth are 32. in the right Ear 4. in the left 4. in the Neck 7. in the Back 12. in the Loyns 5. in the *Os Sacrum* 6. in the *Coccyx* 3. in the *Os Innominatum* 3. in the Ribs on both sides 24. in the Sternum 3. The *Claviculae* 2. Shoulder Blades 2. in the right Arm 1. in the left 1. in the right Cubit 2. in the left 2. in the right Wrist 8. in the left 8. in the right Palm 4. in the left 4. in the right hand Fingers 15. in the left 15. in the right Thigh 1. in the left 1. in the right Leg 2. in the left 2. in the right Knee 1. in the left 1. in the right instep 7. in the left 7. in the right Foot 5. in the left 5. in the Toes of the right Foot 14. in the left 14. the *Sesamoideans* 58. § 2. All these being computed (the *Sesamoideans* excepted, make 250. substantial Bones ; if you add the *Sesamoideans*, the number will be 308. § 3. But the compleat number of the Bones of a Skeleton are only 239, the *Sesamoidean* Bones, Bones of the *Os Hyoides*, and Bones of the Ears, being all excepted, for that they are not joyned by Articulation with other Bones.

CHAP.

CHAP. VIII. Of the ABDOMEN.

I. OF the Abdomen or Belly in general.

§ 1. Hitherto of parts absolutely similar, and similar according to appearance or sence : we now come to treat of parts dissimilar or organical, wherein according to the order of Dissection we shall consider, first, the several Venters of the Body : then the Limbs. § 2. The Venters are three in number, to wit the Caput, or Head, the Thorax, or Brest, and the Abdomen or Belly : now we begin dissection with the Cavities, first, because they offer themselves in the fore-part of the Body: secondly, because they being moist, are apt sooner to putrefy, and send forth stinking fents. And because the lower Cavity or Abdomen is most subject to putrefaction, we first begin with it, that the Guts and Excrements may be the sooner removed. § 3. Now the Abdomen is all that part, distinguished within (by the Midriff,) from the Chest to the Os Pubis. § 4. It is bounded by the Cartilago Mucronata, Vertebrae of the Loyns, Os Sacrum, Hip-Bones, Os Pubis, and the bastard ribs on either side. § 5. It is divided into three Regions or Parts : first, the uppermost called Epigastrium, each side of which is called Hypochondrium : these Hypochondria are also called subcartilaginea, as lying under the Gristles of the short Ribs : it is bounded between the Cartilago Mucronata,

and three inches above the Navel : in the right Hypochondrium lyeth the most part of the Liver; in the left, the Spleen and a great part of the Stomach. § 6. Secondly, the middle part called Regio Umbilicalis, and by Galen *μεσώνας*, extends it self from three inches above the Navel to three inches below it : each lateral part is called Ilium : in the right side are contained the Intestinum Caecum and part of the Colon : in the left the rest of the Colon, and a part of the Jejunum ; the rest of the Jejunum is under the Navel : so that in this Region is contained the whole hungry Gut. § 7. The lower part called *ὑπογάστριον*, Hypogastrium : The lateral parts are called *βυβώτες*, Inguina, the Groins ; in the right sides of which, are parts of the Colon and Caecum, which are tyed together; in the left, a great part of the Colon and Intestinum Rectum: the forepart of it is called *ἄστρον*, and Aquaticulus : and the lowest part which is covered with Hair is called Pubis, the Share ; the Hair begins to appear here in Girls about the twelfth year, but in Boys about the fourteenth year of Age. Under this Region in Women are contained the Bladder, Matrix and Intestinum rectum. § 8. In the hinder part of the Belly are either the upper which make Lumbi the Loyns : or the lower which make Nates the Buttocks. In the right Loyn is placed

placed the right Kidney: and in the left the left Kidney. § 9. Moreover the Abdomen consists of Parts containing, which are either common, as Cuticula, the Scarf-Skin; Cutis, the Skin, Membrana adiposa, the Fat; Membrana carnosa, the fleshy Membrane: Or Proper, which are the Muscles of the Abdomen, and the Peritoneum. § 10. Or contained, which are, 1. The Omentum. 2. Stomach. 3. Guts. 4. Mesentery. 5. Pancreas. 6. Liver. 7. Gall. 8. Spleen. 9. Reins. 10. Black-choler-cases. 11. Ureters. 12. Bladder. 13. Spermatick Vessels. 14. Testicles. 15. Vasa deferentia. 16. Yard. 17. Spermatick Vessels in Women. 18. Testicles in Women. 19. Vasa Deferentia in Women. 20. Womb. 21. Hymen. 22. Cunnus. 23. Child in the Womb. 24. Vasa Umbilicalia. Of all which we shall God-willing treat in order.

II. Of the Muscles of the Abdomen.

§ 1. We have already treated of the Muscles of the whole Body in a very particular manner (in cap. 6. foregoing :) but because we design to treat of the Constitution of all Organick parts, we cannot here wholly omit them, but shall express our Sense in a more brief and general manner. § 2. The Belly has 5 pair of Muscles, viz. Obliquus ascendens: obliquus Descendens: Rectus: Transversalis: and Pyramidalis, being 5 on either side. § 3. In the middle of the Abdomen, between the Musculi recti, arises the Linea alba, (from the meeting of the broad Tendons of the other thin Muscles,) which is of exquisite Sense.

III. Of the Peritoneum.

§ 1. It is so called (a circumtendendo) from stretching and spreading about, being drawn over all those parts between the Midriff and Thighs. § 2. Its original is from the first formation, at the Back-bone, at the first and third Vertebrae of the Loyns, where it is thicker, so that it cannot in that place be separated without breaking. § 3. The Muscles of the Belly being taken away, the Peritoneum comes to View, which is a Membrane, thin and soft, that it may not be troublesome; but strong and compact, that it may be happily distended, and which doth cover all the Bowels of the Abdomen or Belly. § 4. It is tyed above to the Midriff; below to the Share and Flank Bones: in the forepart firmly to the transverse Muscles, but chiefly to their Tendons about the Linea alba, behind to the fleshy Heads of these Muscles loosely, and the Membrane of the Nerves, which come from the Vertebrae of the Loyns. § 5. The Intention of this firm Connexion is to press equally the Belly to expulse the Breath upwards and the Ordure downwards: if it had not been, the Peritoneum would have been wrinkled, the Muscles being contracted: if it had not been loose tyed to the fleshy parts, the contraction of them in the compression of the Belly had been hindered. § 6. It is spermatical, cold and dry by Nature, and of a substance not simple and uniform, but double, and unequal in thickness. § 7. It is a membrane double in all places, but is most apparent about the Vertebrae of the Loyns,

Loyns, where between the duplications lye the *Vena Cava*, the *Aorta*, and the *Kidnies*: above the Navel it sticks so close, that its duplication cannot easily be discerned: but from the Navel to the *Pubis*, it is manifestly divided into two Coats, so far distant, that the Bladder is contained between, and in Women the Womb also. § 8. *It is thicker in Women from the Navel to the Pubis, that it may stretch the more when they are with Child*: in Men that are great eaters, it is thicker from the *Mucronata Cartilago*, to the Navel. § 9. *It is constituted as Authors think of a ligamentous and a nervous substance*; being in shape oval, it encompassing all the *Abdomen*; having a surface inwardly smooth, and bedewed with moisture from the Guts which touch it. § 10. *It has a hole before in a Child in the Womb; Above (saith Bartholine) it has three holes, where it grows to the Diaphragma, for the passage of the Vessels*: the first where the *Vena Cava* passes through; the second where the Stomach passes: the third where the *Aorta* and sixth pair of Nerves do pass through the *Midriff*. *Beneath* it is also perforated about the Fundament, the Neck of the Bladder, the Womb, and the Vessels w^{ch} pass through to the Thighs, the Muscles of the *Abdomen*, and the Skin. § 11. *Yet Riolanus saith, That its continuity is not pierced, it being so admirable a peice of Workmanship, for (saith he) although Vessels pass into it, and out from it, yet all this is performed from the doubling of it, so that the inter-*

nal Tunicle remains unpierced, which comprehends the parts of the first Region, as the external doth the parts of the second Region, which are placed within the Belly. § 12. *The Umbilical Vessels also are placed in the duplication of the Peritonæum, that they may march the more safely*: these Vessels are four, 1. *The Umbilical Vein*, which goes to the Liver. 2. and 3. *The two Umbilical Arteries*, which go to the *Iliack* branches of the *Aorta*. 4. *The Urachus*, which coming from Navel goes to the Bladder: tis nothing else but an indurated knot of the aforesaid Vessels: in Infants these Vessels are all open, but in old people altogether closed, and turned into Ligaments. § 13. *The Peritonæum receives, saith Bartholine, Vessels from the adjacent Diaphragmatick, Mammary, and Epigastrick Vessels, and sometimes from the Seminary*: it also receives small Nerves, from those which are carried to the Muscles of the *Abdomen*, from whence it has the Sence of Feeling. § 14. *It has two oblong processes or productions, called Didymi like Pipes or Wide Channels, descending in men into the Cod, by the holes of the Tendons of the oblique and transverse Muscles, in which processes the Seminary Vessels descend and run back*: these productions near the Stones are more widened, and become the Coats of the Testicles. § 15. *Of which Coats, if the outer be widened; and the inner, (which sticks most firmly, except by the Os Pubis where it is separated) be broken, a rupture is caused*

fed. § 16. Its use is to contain the parts; and to send Connexions here and there; to bestow Coats upon all the Bowel of the Abdomen, thicker or thinner as need requires to carry Vessels safely, between its duplicature, which run a great way; to give a covering to the Diaphragma, Liver, and Spleen; to produce the Ligament also which upholds the Liver: to make a communion with all the principal parts by Veins, Arteries, and Nerves; to produce the Omentum; and by its reduplication the Mesentery.

IV. Of the Omentum, or Caul.

§ 1. It is called in Greek *ἐπιπλόον* Epiploon, in Latin *Omentum*, and in English the *Caul*, so called because it floats or swims upon the Guts: others call it *Zirbus*, *Rete*, or *Reticulum* the Net, because of the stragling course of the Vessels. § 2. It lies under the Peritonæum, and is scituate at the Liver, Spleen, and bottom of the Stomach, and from thence is spread upon the Guts, whose turnings it involves, and enters into: in some it ceases at the Navel, in others it falls below the Navel, and sometimes it reaches to the Os Pubis where it is inserted.

§ 3. It is a thin Membrane indowed with much Fat, double, and disjoined in some places, so as that you may thrust your hand between: as in that part which is stretched out above the Guts.

§ 4. Its uppermost Membrane doth spring from about the bottom of the Stomach, from its common Coat, and is tyed to the hollow part of the Liver and Spleen. § 5. Its lowermost doth spring from the Pe-

ritoneum, immediately under the Midriff, towards the Back, and is tyed to the hollow part of the Liver, to the Midriff, to the Duodenum intestinum, to the Convex part of the Spleen, and last of all to that part of the Colon, which marches under the Stomach.

§ 6. In Men, when it descends into the Cod, it causes the Rupture Epiplocele, which happens most commonly on the left side, because it is extended rather to the left than to the right side. § 7. Its figure saith Galen, Resembles that of a Falconers pouch, the Mouth is round, and the bottom is made of two Membranes joyned together;

this, saith Galen, will appear, if you fill it with Water. § 8. Its substance is membranous, that it might admit dilatation and extension: it is thin, that it might not burthen the subjacent parts: and it is compact to hinder the dissipation of the Internal heat, and to repel the External cold. § 9. Its weight is commonly about half a pound, yet Vesalius saith, That he saw a Caul of five pounds weight. § 10. It hath Veins only from the Porta, Gastroepiplois dextra & sinistra, which are inserted into its upper Membrane;

but Epiplois dextra & postica, into its inferior Membrane: It has so many Arteries from the Ramus Celiacus & Mesentericus; and small Nerves from the Costal or double branch of the sixth (but with us the ninth) pair. § 11. By reason of the many Veins and Arteries, it is very full of Fat. (yet Bartholine saith, He saw one perfectly fleshy) which is to strengthen those Vessels: between which

Innumerable Kernels are put to suck in the dreggy humours : this Fat, *Bartholine* saith, He had often observed to be molten in such as have been sick of Consumptive Feavers : when the Stomach is full and the Gut empty, the upper Membrane is raised, the lower remaining in its place : but when the Guts are full and the Stomach empty, the lower Membrane is raised up, the upper remaining in its place. § 12. It is tyed to the Stomach, being a middle part between the Colon and the Spleen : and that it should not totter from side to side, it is tyed in the right side to the Colon and Liver, but in the left, to the Spleen : the lower part is free and untied, that sometimes the upper, sometimes the lower Membrane might rise up. § 13. Its uses are, 1. to cherish and strengthen the Internal heat of the Stomach and Intestines : and therefore that Fencer, who by reason of a Wound, had a part of it cut off by *Galen*, had afterwards a weak Concoction, and was easily hurt by Cold, for which Cause he was always forced to cover his Belly very well. 2. According to *Galen* to give nourishment to the parts, in time of Famine. 3. To contain the humours flowing from the Intestines, which the Glandules cannot receive wholly at one time. 4. By the help of its Membranes, to prop up the Branches of the Veins and Arteries which go unto the Stomach, Duodenum, Colon, and Spleen, and to generate the Fat.

V. Of the Stomach.

§ 1. The Stomach is called in

Greek *γαστήρ* and *καλιὰ*, from its Cavity, in Latin *Ventriculus*, to distinguish it from the great Venter. § 2. It is situate in the Epigastrium, a place encompassed with no Bones, that it might stretch the more easily, immediately under the Midriff, which it toucheth, so that if it be too full, it causeth a difficulty of breathing by hindering the motion of it. In the forepart and on the right side it is covered with the hollow of the Liver : in the left by the Spleen ; so that the Stomach is as it were between two Fires, bending a little towards the left Hypochondrium, if the Spleen holds its natural bigness : otherwise, if the Spleen is bigger than ordinary, it thrusts the Stomach into the middle : towards the back part it leans on the Aorta, the Cava, and the Pancreas, which helps its heat. § 3. Towards the right hand it grows small by little and little, that the Meat may be gradually thrust thither, whence, saith *Bartholine*, it is better for such as lye down to sleep, to lye first upon their left side till the digestion be finished, and afterwards upon their right, otherwise than is commonly imagined ; for that in the left side there is the bottom where the meat ought to tarry, for being rowled to the right side (where the Pylorus is) it is nearer passing out. § 4. Its bigness is commonly such, as may be capable to receive so much Food at one time as is sufficient for Nutrition : but this cannot be exactly limited ; because being empty (if strong) it is so contracted that it is no bigger than a mans fist : be-

being stretched and widened with store of Food, it will contain six pound of drink, with about two pounds of Meat, as is dayly seen in such as love their Bellys. It is less in Women than in Men, to give way to the distention of the Matrix: and it is commonly seen that such as have large Mouths (being for the most part great eaters) have large Stomachs.

§ 5. It is said to be the Kitchen of the first Concoction of the Chyle, and is composed of three Tunicles: the outwardmost is common from the Peritoneum: and is the thickest: the middlemost is proper to itself, and fleshy: the innermost is from the Dura Meninx, and wrinkled, as also hairy like a peice of silk: this is continued with the Tunicle of the Oesophagus, Mouth and Lips, that nothing may be received in, which is ungrateful to the Stomach: hence it is that when Choler is in the Stomach, the Tongue is bitter and yellow: this Coat is wrinkled, that it may be the better dilated: the wrinkles proceed from a fleshy crustiness sticking thereto, the better to defend it from hard Meats: the Crust is thought to arise from the Excrements of the third Concoction of the Stomach: It is spongy, and has passages like short Fibres, from this inner surface to the outward, that the thinner Chylus may be the better retained till the end of Digestion. § 6. The use and office of these parts (saith Dr. Willis) are these, the innermost Coat serves chiefly for defence: the middlemost for the office of motion: and the third,

that it might be as a covering for the whole. § 7. The Stomach has two Orifices, and both of them in the upper Region thereof: the left is called Os Stomachi, the right the Pylorus, or Porter. § 8. The Os Stomachi, or left Orifice, is wider than the right Orifice, that Meat not well chewed might the better pass: it is called *καρδια*, Cor, by the Ancients, from whence the pains which happen in it are called *καρδιαλγία*, and *καρδιωμοι*, because there is a great content between it and the Heart: as also because of its exquisite Sence, and because the Heart and it, have twigs of Nerves from the same branch, which springs from (the sixth but) our ninth pair, so that the one being affected primarily, the other must suffer by consent. § 9. This Orifice has orbicular Fibres, that the Meat and Drink being once received within the Capacity of the Stomach, it, by a natural instinct, may exactly shut up the Mouth of the Stomach, least the fumes and heat should break out, which might not only go into the Brain and breed Diseases there, but also hinder Concoction. § 10. *Πύλωρος*, The Pylorus, or right Orifice, called Janitor, the Porter or Door-keeper; it makes way for the Chylus to descend into the Duodenum. It is of equal height with the former Orifice, least the Meat and Drink should slip through before they be digested. It is not wide as the other Orifice, because it was to transmit the elaborate Chylus, which is done by the strength of

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the Stomach contracting it self. Wherefore the *Pylorus* besides its transverse Fibres, has a thick and compact Circle, representing the *Sphincter* Muscle, that it might the more easily shut and open; it abides shut till the digestion is finished, viz. till the Meat is turned into a liquid and whitish Chyle, or Cream as it were: but, as *Wallæus* observes, it often opens and shuts, to take in the digested Chylus as it were by peice Meal, and as it is digested, the which it does by opening it self a little way, that the more undigested may not pass through. § 11. The *Pylorus* (saith *Riolan*) has a Valve round in shape, and as visible and remarkable as the Valve in the Gut Colon: this Valve is to hinder the Chyle from returning back again into the Stomach. § 12. The Stomach in mankind is but one in number (yet sometimes it is divided according to its longitude into two Cavities, and such Vomits with great difficulty) if it is single and rightly shaped, it is of a longish spherial Figure, and may be compared to the Belly of a Bag-Pipe: It is joyned to the Gula on the left side where its upper Orifice is: it is tryed to the Duodenum on the right side where the *Pylorus* is; the bottom is joyned to the upper part of the Caul. § 13. The Stomach has three sorts of Fibres as straight, oblique, and transverse, which are thought to serve for Attraction, retention and expulsion: but some more truly think they conduce chiefly for strength. The outward Coat has more right Fibres: the second more trans-

verse: The inner Coat (saith *Costæus*) has only oblique: but *Fallopianus*, *Laurentius* and *Bartholine* saith, It has all kinds of Fibres. § 14. The Stomach has Veins; as the *Vas breve*, from the Spleen, which is inserted not into the Mouth, but into the bottom thereof, and there insinuating it self into the Tunicles, it creeps upwards between them, but is obliterated, before it reaches the Orifice. It receives Veins from the *Vena Portæ*, viz. the *Pylorick*, *Gastrick*, and *Gastroepiploick* branches both right and left: from the *Ramus Mesentericus*, it hath the *Gastroepiploica sinistra*, and the *Vas breve*: and before it is divided it has *Gastroepiplois dextra*: from the *Ramus splenicus* it has the *Gastrica*, from whence springeth the *Coronaria*. The *Gastrica* is a notable Vein, which creeps along near the bottom of the Stomach, spreading it self into innumerable branches. § 15. These sanguiferous Vessels (as also the Arteries of the Stomach) tend inwardly, are scattered at length into innumerable Spirits, and terminated in the inmost nervous Tunicle, whose interior superficies, through the thickness of the Puncts in which the Vessels end, is dyed red, and made as it were bloody. This (saith *Dr. Willis*) evidently appears, if after the Stomach is immersed in warm Water, the hairy Tunicle be separated; for then the nervous Tunicle, by reason of the close endings of the Vessels, seems hidden as it were with a little bloody Net. § 16. The Stomach has Arteries from the *Ramus Cœliacus*, which

do accompany every Vein, that Blood may be supplied from the Heart for nourishment of the part: this Blood flows back again to the Heart, according to the Doctrine of Circulation, found out by the renowned Harvey, and proved by the learned Walæus. By the Splenetick Arteries an acid sharp juyce is conveyed into the Stomach from the Spleen, as Walæus and Hogeland, and after them Willis think; and as Bartholine also grants, when there is no *Vas breve*. § 17. The uses of these Veins and Arteries are chiefly (as Willis saith) To convey the heat, which is for concoction and digestion in the Ventricle: for as much as the Blood growing hot, round about the bottom, and all the sides of the Ventricle like a Cauldron, it is detained as a perpetual lighted Fire: and indeed to this end, that bloody lake seems to be there situated. But besides this use, these sanguiferous Vessels are thought to have another not less necessary, viz. the Arteries to carry Blood to nourish the part (as aforesaid) & the Veins to carry it perpetually back again, but withal so, as by this means there may be made an immediate and constant commerce backwards and forwards between the Chyle and the Blood. § 18. Now as Food being put into the Stomach is dissolved not only by Concoction, but also much more by Fermentation in the Ventricle, and disposed into a laudable and homogeneous Chyle, by a certain spiritual Liquor (like as Yest works Ale) which Liquor or humour the Arteries aforesaid

(at § 16. above) can only furnish: this Liquor being plentifully conjoynd with the reliicks of the Chyle, sticking in the hairy Crust, without doubt constituted that juyce which is accounted the ferment of the Stomach. § 19. Moreover, Piccolhomineus and Aquapendens, with whom Bartholine and Willis agree, will have these vast number of Veins in the Stomach to suck out the more thin and subtil part of the Chyle, before it passes out of the Stomach to the Liver. This appears reasonable, because, first when the Stomach is overcharged with Food, it would be ready to burst, if it should not have some very sudden Vent: secondly, by reason of such a speedy, or so sudden a passage as they have, who have drunk much, since that they do plentifully and presently piss it out again: thirdly, when from things eaten or drunk a quick refection is required, which truly (in such an immediate space of time) cannot so well be made by the long wanderings of the Intestines, and of the Chyliferous Vessels: what way then is there more likely, than that the Veins sticking most closely within the Cavity of the Ventricle, should receive a certain more subtile Portion of the Chyle, and forthwith pour it into the Blood? Certainly hence it is that strength is so soon repaired by fragrant Wine, Broths, and other comfortable things. § 20. It has many Nerves from the sixth, but with us the ninth pair, viz. two in its Orifice from the Stomack branches, which being produced

duced after they have run back in the *Thorax*, and furnished the *Lungs* and *Pericardium*, because they are soft, and go a great way, are covered with strong Membranes. These so cross one another, that they are carried obliquely, & without doubt with greater safety. *The right branch* compasses the fore and left part of the Mouth of the Stomach: *the left branch*, the hinder and right part of the same: from these, branches of Nerves are sent downwards, to the very bottom; a branch goes from the left Nerve, along the upper part of the Stomach to the *Pylorus*, which it infolds with certain branches and goes to the hollow of the Liver. *Other two Nerves* also go to the bottom of the Stomach from the branches which run along by the roots of the Ribs. § 21. Hence it is that when the Brain is hurt, the Stomach is sick and falls a Vomiting, as in a *Vertigo*, *Hemicrania*, &c. as also when the Stomach is misaffected, the Head and Brain are ill, or afflicted with pain. Also by reason the Orifice of the Stomach is so compassed with Nerves, so as if it was altogether made of Nerves, it becomes of a most exquisite fence, and hence it is that Vomiting so often succeeds in many Diseases, where there is a consent of parts with the Stomach. § 22. The Stomach is the seat of hunger, and does the first of all parts feel the want of food, (afterwards the other parts by a faintness and universal feebleness all over:) for the blood being spent upon the nourishment of the Body; the fi-

bres of the internal Membrane of the stomach are contracted, & so this pain which is called Hunger and Thirst, is caused. § 23. The action of the Stomach is said to be Chylification, or making of Chyle, but it may be more truly said to be the place of Chylification, for the action is performed by the Spirit which is the truly efficient Cause. Now to the making of Chyle there ought to be Fermentation and Concoction: Fermentation is performed by things sour or acid, as Vinegar, juices of Oranges, Limons, Citrons, Oyls of Sulphur, Salt and Vitriol, Cream of Tartar, &c. hence things acid or sharp are said to strengthen a weak Stomach: to the former things add an internal efficient, viz. an acid sharp juice from the *Vas. brevis*, or Splenetick Arteries: Bartholine saith, Fermentation goes before Concoction, but I judge they go both hand in hand, or jointly together. To Concoction three things are required: First, somewhat to cut and mince it as it were, or to break and make it small, as Chewing. Secondly, moisture to temper the Food and make it liquid, as Drink and Spittle. Thirdly, somewhat to melt it and make it thin, such as is the natural heat caused by the Veins and Arteries (by § 17. above) as also by the heat of the adjacent parts, as in the right side the Liver, in the left the Spleen: above the Midriff: below the Guts: before the Caul: behind the Trunks of the *Cava* and *Aorta*: this heat of the Stomach is temperate and somewhat moist,

moist, that this Concoction might resemble boyling. § 24. *Lastly, From what has been said, the use of the Stomach appears, viz. to be a receptacle for the Meat and Drink, by reason of its notable and large Cavity: and there to keep it, till it is concocted for the due nourishment of the whole Body.*

VI. Of the Intestines or Guts.

§ 1. *Ἔντερα, παρὰ τὸ ἐντὸς εἶναι*, *Entera* in Greek, *Intestina* in Latin, *the Guts* in English, begin at the Pylorus, and end in the Anus or Fundament. They are called *Intestina* or *Inwards*, because they are in the inmost seat of the Body. § 2. *They are of a round figure that they might the better contain the nourishment; of a membranous substance, the better to have constriction and dilatation: and indeed their substance is almost the same with the Stomach, having three Coats, one common and external, being bred immediately from the Mesenterium (except where the Duodenum and Colon cleave to the Stomach, there it arises from the lower Membrane of the Caul;) but mediately from the Peritonæum. The second which is the middlemost, is proper, being membranous, strong and furnished with fleshy Fibres. The third, which is the innermost, is also proper, nervous, and lined with a Crusty substance, framed of the excrements of the third Concoction of the Guts, glazed as it were with a mucous or flegmarick substance, bred in the first Concoction, by which Excoriation is not only hindered,*

when sharp humors pass through the Guts, but also by its assistance, the expulsion of the feces is furthered. § 3. *This internal Membrane has such a crusty substance, that the Mouths of the Meseraick Veins might not be stopped; and that neither they nor the Coat it self might be made Callous, by the continual through-fare of the Chyle.*

§ 4. *The Fibres of the internal Membrane of the small Guts are oblique, but of the external Coat, transverse: because these are appointed for the retention and expulsion of the Chyle. But in the thick Guts, the inner Coat has transverse Fibres, the outward has oblique and straight, because they are appointed for the expulsion of Excrements: the inner Membrane also of the small Guts is full of Wrinkles, to stay the Chylus from passing too soon.*

§ 5. *As to the length of the Guts, they are said to be six times as long as the whole Body whose they are, little more or less: but Paræus, Laurentius, Riolanus, and before them Celsus, (beginning at the Oesophagus) accounted them to be seven times the length of the Body. Dr. Fluid (our Country man) in a certain Body five Foot, eight Inches in length, found the Guts by measure, to be just nine Ells long, or thirty three Foot, nine Inches which wants just three Inches of six times the Bodys length.* § 6.

The Guts are covered on the outside with Fat; on the inside with the slimy, mucous substance aforementioned. § 7. *They are scissuate in the Abdomen, the greater*

Cavity whereof they fill up ; but sometimes by Diseases they are forced to one side. They are all of them, both small & great (except in their beginning and end, and a part of the Colon, which is joyned to the *Mesentery*) as it were plainly knit to the brim of the circular *Mesentery* ; by which, the Caul coming between, they are tyed to the Back, and born up in the Cavities of the *Os Ili.* It is wonderful, that the Guts (of so great a length) should be comprehended in such a Compass, so as that they are not above a Span distant from the Center. Also it is observable, that the place of the *Mesentery* is collected into many and great folds, and hath in its circumference about eleven or twelve Foot : in which Circumference or length, that it might press together the length of the Guts, every single handful, does infold about three handfuls of the Intestines. And they are thus formed and placed, nor only that they might subsist in a little and narrow place distinctly and without confusion : but also that they might be moved by a slow and successive motion, and as it were creepingly from one end to the other: this motion is caused from the insertion of the Tendons of the mottricious Fibres into the brim, or border of the *Mesentery*. § 8. *They have a motion, which is peristaltick, or the wormlike motion, by which they move themselves all over by a contraction from the upper parts downwards* : moreover they have many turnings and windings, or bendings, which

serves to keep the nutriment, till the concoction is perfectly finished, and the *Chylus* distributed. § 9. *For Vessels they have*, 1. The *Vena Lactea*, distributed chiefly between the common and proper Membranes, which carry the Chyle to the Liver, and Vessels of the Chyle. 2. Veins, from the *Vena Portæ*, which carry back the Blood to the Liver, which remains after the Guts have received their nourishment. 3. *Arteries* from the *Celiacæ* for nourishment, which by their motion preserve from putrefaction. 4. *Nerves* from (the sixth but with us) the ninth pair. This great plenty of Arteries and Veins which the Guts have, is thought to be necessary, that the greater plenty of Blood might be carried through the *Vena Porta* and the Liver, and thereby might come to be perfected by the Liver. § 10. *The differences of the Guts are two-fold*, viz. 1. *the thin or small*. 2. *The thick or large Guts*, yet notwithstanding they make but one continual Pipe or Channel from the *Pylorus* to the *Anus*; but this passage has divers distinctions from its magnitude, number of Turnings, Substance, Situation, Figure and Office. § 11. *The small Guts are three*, to wit, the Duodenum, Jejunum, and Ileum. *Thus perfect and distribute the Chylus, which touches every part of the 12 Coats, by reason of their narrowness*: and its distribution is helped by the joined Peristaltick motion of the Guts, whereby they are contracted from the upper part downward, and so thereby squeeze, strain

strain or force the *Chylus* into the *Vena Lactea*. § 12. The *Intestina Crassa* or thick Guts, so called because they have not only the thicker Coats, but also have the larger Cavities, & contain the thicker part of the Chyle, being made to collect and for a season to retain the Dung. These are also three, to wit, the *Cæcum*, *Colon*, and *Rectum*, being situate by the sides of the small Guts, which they encompass as it were, that they might give way to the thin Guts, and that they might not be oppressed by the thick.

§ 13. The weight of all the Guts (being dried) according to *Loſelius*, is about a pound: A Powder made of them, and given ad ʒss or ʒj. is said to be excellent against the Cholick, Wind, and other distempers of the Bowels. § 14.

I. The description of the *Duodenum*. *Galen* calls it *ἄκρον*. *Ecophysis*, *Herophilus* *δωδεκάδακτυλον*, *Dodecadactylon*, as if it were just twelve fingers breadth long; though in our days we can scarcely find it eight inches in length: but it may be they accounted the *Pylorus* in their measure. It comes from the right-side of the *Pylorus* towards the Back-Bone and passes under the Stomach, where being joyned by the *Vertebrae* of the Loyns by membranous Ligaments, it descends right along without any Circumvolution, and is terminated where the first winding or turning begins, which is where they begin to be tyed by the Mesentery. § 15. In the *Duodenum* is the *ductus Choledochus* near the *Jejunum*, being the passage of the Gall, (for which reason it is found yellow in Dissections;)

as also the *Ductus Virgongianus*, or the new invented passage of the *Pancreas*, which *Bartholine* saith, He has seen come forth in one Mouth with the former *Ductus*: This Gut has a proper Vein called *Vena Duodena*; and an Artery from the right branch of the *Cæliaca*. It is thicker than the rest of the thin Guts, but has a more narrow Cavity, least the *chylus* should slip in too fast. § 16. II. The description of the *Jejunum*. It is so called because for the most part it is more empty than the rest, especially in Dissections. This emptiness is thought to arise from the vast number and greatness of the *Vena Lactea*, which in their place are as it were Infinite, and do presently suck out the greatest part of the Chyle, which may be caused also partly from the great liquidity of the Chyle, and the approximation of this Gut to the Liver, where, by reason of the Acrimony of the Choller, (sent pure from the Liver,) the chylous matter suddenly passes away; for the *meatus biliaris*, or Gall-passage enters in, either at the beginning of this Gut, or at the end of the *Duodenum*, bringing Choler from the Liver to provoke expulsion. § 17. Its length is about nine foot and half, or ten foot long, and its breadth about an Inch: Its inner Membrane is longer than the outward, because it hath innumerable orbicular and transverse wrinkles or folds, to stay the *Chylus*. It begins on the right-side under the *Colon*, where the *Duodenum* ends, and the Guts begin to be wreathed, and

and filling almost the whole Umbilical Region, it endeth at the beginning of the *Ileum*. Of all Guts it hath the greatest store of Veins and Arteries, and by these you may find the Circumscription of it. Its Veins come from the *Mesenterica dextra*, which are common to the rest of the Guts, the *Rectum* excepted: Its Arteries proceed from the *superior Mesenterick Artery*: and its Nerves from a branch of (the sixth, but with us) the ninth pair, which is spread out unto the roots of the Ribs. § 18. III. *The description of the Ileum*. It is so called because of its many turnings and windings, for which cause also it is called *Volvulus*: these many turnings make for the retention of the Food, upon which account it has fewer wrinkles and foldings. It hath thinner Membranes than the rest of the small Guts. It is seated under the Navel, filling both the *Iliac*: it begins where the *Fesjunum* ends, viz. where both smaller and fewer Veins appear, and ends about the place of the right Kidney, where it is joyned both with the *Cæcum* and *Colon*. § 19. *It is the longest of all the Guts, being about seventeen or seventeen and half feet long. and about an Inch broad, being the narrowest of all*: Its external Coat is more fleshy and thin, than its internal; it has transverse and orbicular Fibres, with some few straight to strengthen the transverse. The internal Coat has partly straight, partly oblique Fibres. It has Veins from the *Mesentericus dexter*: Arteries from *Mesentericus supe-*

rior: and Nerves from a branch of the ninth pair, as aforesaid. The *Ileum* has a *Peristaltick* motion, (such as Worms have when they Crawl, or Leeches when they Suck,) to draw down the *Chylus*; for it lyes not in our power, as do the excrements: from this motion, when the upper part of the Gut gets into the lower, proceeds the *Iliac passion*. This is the Gut also which commonly slips down into the Cod, whence comes *Hernia Intestinalis*, or Rupture of the Guts. § 20. IV. *The description of the Cæcum, or blind Gut*. It is called *τυφλόν*, *Cæcum*, the blind Gut, because that one end of it is shut, so that at the same Orifice the Chyle passeth and returneth, from whence also it is called *μονόκολον*, *Monocolon*. It is a little Appendix like a long Worm, which arising from the end of the *Ileum* and beginning of the *Colon*, spreads it self upon the *Colon* like a twined Worm. It is bigger in an Infant than in a Man, four Inches in length and one in breadth: yet sometimes it is found exceeding wide, equal to the Stomach it self, as both *Riolan* and *Bartholine* affirm, They have seen. It is not joyned to the *Mesentery*, but is annexed to the Membrane of the *Peritonæum*, and by its end tyed to the right Kidney. § 21. *This Cæcum in sound persons is always in a manner empty: in four footed Beasts, it is always full of Excrements: Apes have it larger than a Man; and Dogs larger than Apes, but Conies, Squirrels and Rats largest of all: the proportion of their Bodies*

Bodies confidred. *Its use*, is as *Helmont* thinks, to keep the *Fermentum Stercoreum* or Turdy Leven, which turns the Excrements of the Chyle into plane Turds: it may also serve to sustain the *Peritonæum* from falling down instead of a Ligament.

§ 22. V. *The description of the Colon*. It is called *κώλον*, *περὶ τὸ κολύειν*, because it detains the Excrements: In this Gut it is, where Wind often exercises its fury, from whence it is called the Cholick. It is the largest of all the Guts, capacious and round, that it might contain all the Excrements: and about seven or seven feet and a half in length. It begins in the right flank, from the end of the *Ileum* and *Cæcum*, by the right Kidney, to which it sticks: then being turned backwards, it ascends by the *dextrum Ileum*, till it comes under the Liver, where it is sometimes joyned to the Gall-Bladder, dying it of a Clay coloured yellowness: then it passes farther transversely under the Stomach to the left *Ileum*, where it is joyned to the Spleen with thin Membranes: then being tyed to the left Kidney, it goes to the beginning of the *Os Sacrum*, where it has very crooked turnings, fit to detain both Dung and Wind, and ends upon the *Rectum*. Thus it is first tyed to the right Kidney, then to the bottom of the Stomach, and at the last unto the left Kidney, so that it doth as it were encompass the whole Belly, ascending and descending, that the Excrements may be detained, and not go out all at once, nor that we

might be always going to stool.

§ 23. *The Colon has Cells which springs from its internal Tunicle, which that they might not be dissolved, but keep in their figure, they are held by a certain Ligament or band about half an Inch broad, which is implanted through the middle thereof, arising from the Cæcum, and being stretched along, its longitude in the upper part, is terminated in the Rectum: The use of these Cells are to hinder the too hasty flowing of the Excrements to one place, and that if there should be any hard matter not sufficiently digested beforehand, it might be staid to be perfectly concocted, and at last through the *Vene Lactææ* or milky Meseraicks lying in the Colon, the said concocted matter might be sent to the Liver. Moreover by reason of its largeness, it has two strong Ligaments, one upwards another downwards that it may be tyed to the upper and lower parts.* § 24. *And because it wants the band of the Mesenterium, and its fatty humor, Nature has placed about it here and there certain fat Appendices, or fringes of Fat (from the Spleen to the Rectum) to moisten it, as Spigelius and Rivolanus have observed.* § 25. *The Colon has a Valve or Shutter at its beginning where it is joyned to the Ileum, sufficiently thick and membranous, and sometimes like to the Sigmoides in the Sinus of the Heart, looking upwards and not downwards, as Laurentius saith, For the Excrements do ascend and not descend, when they pass out of the Ileum into the Colon, by reason of the natural scituation* of

of the Guts. This *Valve* was first invented by *Salomon Alberts* an Anatomist of *Wittenburgh*: *Baubin* also found it out: *Varolus* also an Anatomist in the university of *Padua* assumes the Invention of it to himself *Anno 1572.* to which *Riolan* assents. It may be found out by pouring Water into the *Intestinum rectum*, and holding up the Gut, if the Valve be found, the Water will stay when it comes to it: you may also prove it by blowing in Wind. This *Valve* so stops the hole which is common to the *Ileon* and *Colon*, that Wind cannot ascend to the *Ileon*, much less Excrements regurgitate. If this *Valve* be relaxed by sickness, Excrements may regurgitate, & Clysters also come to the Stomach. This *Valve* is only one, membranous, about two fingers broad, hanging upon a fibrous Circle, and so shaped, that it is fit to shut the *Intestinum Ileum*. From the being of this *Valve* it is, that the matter of Clysters, cannot naturally reach or go to the *Ileon* or small Guts. § 26. The *Colon* has Veins and Arteries under the Stomach from the *Epiplois postica*; but in the left side it has the *Hæmorrhoidal Vein*, and from the *Mesentericus inferior* the *Hæmorrhoidal Artery*. § 27. VI. The description of the *Intestinum Rectum*, or *Arse Gut*. This Gut is called *Rectum*, or the straight Gut, because it goes straight or directly out, without any turning. It begins where the *Colon* endeth, and ends at the *Anus* or *Fundament*. It is about nine or ten Inches in length, and not full

out so wide as the *Colon*: it is corpulent and thick, with Fat appurtenances growing thereto on the out-side. It goes straight down from the top of the *Os Sacrum*, to the extremity of the *Os Coccygis* or *Crupper-Bone*, to which it is strongly knit by the *Peritonæum*. This Gut besides its internal fleshy Membrane, has also an external fleshy musculous covering like a sheath, that so it may the more forcibly expel the Ordure, which useth to Clod in the extremity of the *Colon* and *Rectum*: therefore besides the compression of the Muscles of the *Abdomen*, and the natural motion of the *Colon*, this same fleshy sheath, crusheth the Excrements, as it were with ones Hand, that so they may pass out. § 28. It has Veins from the *Portæ* as the others: as also from the *Hypogastrick branch of the Vena Cava* descending, from whence proceeds the *Hæmorrhoids* external: It has four Nerves inserted into its end, which makes this Gut very sensible, as is seen in a *Tenasmus*. This end is called *Podex* or *Anus*, the *Fundament* or *Arse*, the which is stored with 5 Muscles, of which the chiefest is called *σφιγκτηρ Sphincter*, the *Constrictor* or *Shutter*; the other four *Levatores*, or lifters up, whole description see in cap. 6. sect. 25. § 3, 4, 5, 6, and 7. of hist Book. § 29. From what has been said, it appears, 1. That all the Guts concoct the *Chylus* sent from the Stomach better. 2. That the small Guts digest the *Chylus*. 3. That the thick Guts expel the Excrements.

VII. Of the Mesentery.

§ 1. It is called *μεσεντέριον*, *κὶ μεσέντερον* *quasi μέσον ὅρ' ἔντερον*, *Mesenterium*, because it is in the middle of the Guts. § 2. It is one in number, but divided into two parts, to wit, *μεσάραιον*, ὅτι μέσον τῶν αἰσμάτων ἔντερον ἔστι, *κὶ μεσοκόλον*, *quasi μέσον τῆς κώλης*, the *Mesaraeum* and *Mesocolon*. § 3. By the *Mesaraeum* (which is properly the Mesentery) which is in the middle of the Belly, the small Guts are knit together: By the *Mesocolon*, the thick Guts are tyed together, for it knits up the Colon in the right and left side, and in the lower part thereof, cleaves to the *Rectum*. § 4. The substance of the Mesentery (which is the band of the Guts, and keeps them in their places, that they may not run into confusion) is a double Membrane, framed of two proper Membranes, one above another strong enough; and one common, between which and the proper, the Fat, and many Glandules or Kernels lye, as also four Vessels, which by this means safely pass and repass to and from the Guts. § 5. Its situation is in the middle of the Abdomen, sticking to the transverse processes of the Vertebrae by Ligaments, whence is its Original: for it arises from the first and third Vertebrae of the Loyns (whence comes the consent between the Loyns and the Guts) where membranous Fibres are produced from the *Peritoneum*, which turn into strong Membranes. § 6. Its Figure is nearly circular, that so it might be more capable to answer the length of the Guts, and keep them within

a small compass or place: in its rise it is narrow, but in its progress at the Circumference, it degenerates into very many foldings, that it might gather in the length of the Guts: half a Foot of the Mesentery doth gather in above six foot in length of the Guts: but half a foot in its circumference, nor above a foot and a half of the Intestines: the reason is, because the magnitude from the Center to the Circumference is but a Span; but the Longitude of its Circumference is between eleven and twelve feet. In the sides it becomes oblong, especially on the left side, where it descends to the *Intestinum Rectum*. § 7. Its substance is membranous, that it might be light, and not press together the Vessel, by its weight: and that it might be extended to any dimension required, by its Fibres; as also that between the Membranes it might the more readily gather Fat. § 8. The Vessels of the Mesentery are Veins, Arteries, and Nerves, which pass to and from the Guts between the Membranes. § 9. The Veins are called *Mesaraicæ*, and they are two-fold, viz. *Sanguineæ* and *Lactææ*, both which are almost innumerable. § 10. The *Venæ Sanguineæ* or *Mesaraicæ*, receive the Blood from the Arteries, after nourishing of the parts, and so convey it back again to the Liver: they spring from the *ramus Mesentericus*, dexter and sinister: branches of the *Vena Portæ*. § 11. The *Venæ Lactææ*, ascending from the Guts, and carrying the Chyle, do center in the new Milky Gland.

Glandules or receptacles of the Chyle, which have hitherto passed (among Anatomists) as well for the Glandules of the Mesentery already known, as for Fat: these *Lacteal Veins* pass from all the Intestines (saith Bartholine) yea from the *Cæcum*, but most often from the *small Guts*, and in great numbers from the *Jejunum*, from whence arising at the middle Glandule of the Mesentery, where they are entangled like the branches of the Wild Vine, from thence they go partly to the Liver, along with the *Portæ*, by divers Insertions, partly to the emulgent Veins, partly to the *Vena Cava*, as *Asellius*, *Wallæus*, and all quick sighted Men have observed; so that we need no longer doubt, but that the Chyle goes this way, which by trying with Ligature in living Creatures, may more evidently be found. § 12. But after this Invention of *Asellius*, one *John Pecquet* of *Diep*, a Physician in the City of *Paris*, (to the eternal renown of his name) found out a much farther reach of the *Vena Lactææ*, there by discovering the Vessels or receptacles of the Chyle, as aforesaid, and the way thereof to the *Subclavian Vein*, (till then unknown) which he publickly declared at *Paris* Anno 1651. after three years observation: first, that a receptacle of Chyle did from the Mesentery or these Milky Veins of *Asellius* already known, come out, into which, by those several milky Veins, the *Chylus* is drawn from the Mesentery. Secondly, That from the same receptacle, there

did creep up through the *Thorax* to the *Subclavian Vein*, other passages for the Chyle: a more full account of this passage see in cap 3. sect. 12. § 3, 4, 5, and 6. of this Anatomy. § 13. The Mesentery has two Arteries from the *Cœliaca*, the one superior, the other inferior, branches of the *Arteria Mesenterica*, that they may carry Arterial Blood and vital heat of Spirits to the Guts for nutrition and fermentation, and by whose means, also the Blood even in the Mesentery is circulated. § 14. It receives Nerves also, two on each side, from (the sixth but) our ninth pair, or par *Vagus*, viz. from those which wander to the roots of the Ribs; and from the Nerves of the first, second, third and fourth *Vertebra* of the *Löyns*; that they may give the Sence of feeling to the part, as in a bastard Cholick and other pains; and an obscure motion in distributing of the Chyle. § 15. Now that these Vessels might pass safely without Ruption, nature has placed many Glandules between the divarications of the Veins and Arteries, to fill up the spaces and to cherish the heat: the biggest of these is at the Center of the *Mesenterium*, where the distribution of the Vessels begins: This, *Asellius* following *Folopius*, calls *Pancreas*: but it is different from the other great *Pancreas* situate under the Stomach and *Duodenum*, in which is found the *Ductus Virungianus*: for which cause sake it might be called properly enough *Pancreas Mesenterij*, and from hence the *Vena Lactææ* are carried both upwards and downwards

wards to the Heart and Liver. § 16. These Glandules of the Mesentery, are to prop up and support sundry distributions of the branches to the Vena Porta, and Arteria magna; and hence it is, that about the Center of the Mesentery are the greatest Kernels, because there is the distribution of the greater and more collected Vessels: If these become Scirrhus an Atrophia, or extenuation of the whole Body, to wit, a wasting, leanness, and pining follows, because the passing of the Chylus is hindered, whereby the nourishment of the Body is lost. § 17. The chief of these Glandules are in number three, the prime of which three is placed (as aforesaid) in the Center of the Mesenterium, which sometimes is directly placed on the top of the other, under the Coeliack and emulgent Veins, near to the Vertebrae Lumbares, betwixt their Musculi called Psoas, almost in the middle region between the Reins and the Capsule Atribiliaria. which it touches, as also the Reins either immediately, or by emission of its branches. The Pancreas Mesenterij does not always keep the very middle between the Loyns, but sometimes turns a little to the Right, under the rising of the Appendices of the Diaphragma: the Lumbar Glandules which are below, are situated near the left Kidney. § 18. Their deep position is both for their safety, and for heat, by reason of the vicinity of the Arteries, as also for the easier squeezing out of the Chyle: for in the forepart they are pressed by the Mesentery; and at

the sides and hinder part they are streightned by the Vertebrae; and without doubt the Appendices of the Sepum or Diaphragma, and the Musculi Lumbares contribute much help for this purpose. § 19. Their substance in men is glandulous and solid, like other Glandules of the Mesentery, watred as it were with the Vena Lactee, yet capable of Chyle in their least corners. § 20. Their bigness (because there are many more Glandules) are each in length about three fingers breadth; and in breadth about one. Their form is either oval, round, or long. § 21. Their colour is white, almost like unto Milk, which is not easily lost even when the Creature dies: It continues the more firm in Brutes, either because of their double Tunicle, which is as it were soaked in thick Milk, or because of the natural whiteness of the Glandules, and the milky humor contained within them. § 22. Their Connexion is in the hinder part to the Vertebrae Lumbares: in the forepart they are joyned to the Mesentery by small milky branches, which do carry the Chyle to these Fountains or Receptacles: if you turn up the Mesentery, together with the Intestines, you shall see them, if you look carefully towards the left side: At their sides they are joyned to the Capsula atribiliaria and to the Reins, either immediately, (as in some Dogs) yet so as the joyning may be easily parted with a Knife: Or mediately, by the Ramuli Lactei. § 23. Moreover, these now milky Glandules disperse their little branches to that
part

part of the Pancreas, which is under the Duodenum, passing over the left emulgent Vein, & others too, at the left emulgent Artery: they also send out milky branches one to another interchangeably: the upper round one to those which lye under it: and these again imparting those passages communicated to them, to places adjoining. § 24. Bartholine did find in a Dog (opened seven hours after feeding) passages very like to the Lactææ, sometimes with Milk, sometimes with transparent Whey, which crept from the Mesentery, or new receptacle, partly upwards towards the Liver together with the Portæ, sometimes towards the Reins by the emulgents, sometimes by that way where the Vena Cava comes to the Ilia, on which they were spread, and joyned with a Membrane betwixt them, till the Receptacle of the Bladder did hinder his sight of them: these Veins being tied with a Thread did swell downwards, but towards the Mesentery they were emptied, upon which he thought this was a peculiar Vessel destinated for the Serum. But from above, near to the Diaphragma, out of the Receptacles or milky Glandules, proceed the milky branches of the Thorax. § 25. The use of these milky Glandules is to receive and contain the Chylus coming from the Venæ Lactææ of the Mesentery: as also to digest and prepare it by the help of the neighbouring hot Vessels, viz. the Artery and Vein; and then being prepared, to thrust it out into the Thoraces, and other parts, as the Liver; which is easily proved by Liga-

ture; for if these Lactææ whether in the Thorax or going to the Liver, be bound, they always swell on that side next to the Glandules or Mesentery, and grow empty on the other sides. They also squeeze out the Serum, being separated from the Chylus in that light preparation, and expel it either into the Reins adjacent to them: Or into the emulgent Arteries to which they send branches: Or into the Capsule Atribiliaria, appointed for Melancholy: Or, lastly, into the doubling of the Peritoneum, in which they abide, which is sometimes the Cause of the Dropsy Ascites: and herein we have a great deal more light than formerly: and a reason may be given why a Dropsy is many times ended by Diureticks, and dissolved by Urine. § 26. From the foregoing things, many observations arise; as, first, how those who are extream Drinkers, come to piss out what they so immediately drunk, and in so great an abundance; for that the ordinary way through the Liver, Heart, Arteries, emulgent Veins, Ureters, and Bladder, is vastly longer, and more tedious. § 28. Secondly, Hence also the cause is seen, why in a real Diabetes, the drink is so voided through the Bladder in a very short space, as it is received without change of consistency, colour, taste, or smell, as Galen, Trallianus, Ætius, Amatus Lusitanus, Zacutus Lusitanus, Saxonia, Trincavallus, Salmuth, Sylvaticus, and Bartholinus have sufficiently proved; whereas in Truth, the distemper of the Reins

Reins, looseness of the passage, or weakness of the attractive or retentive Faculties, can never be always able to solve the Knot. § 28. Thirdly, Hence appears the reason of an Atrophica of the Parts, especially those of the Thorax, which draw the Chylus out of the milky Receptacles: for that they are sometimes prest together, whereby the distribution of the Chylus is obstructed: sometimes also they are inflamed, tumified and afflicted with a Scirrhus. § 29. Fourthly, Hence it is that Lithontriprick or Nephritick Medicaments, do presently ease such as have a pain in their Reins: as likewise such as incite to Lust, do immediately without stopping of the passage, come to the Arteries emulgent, and spermatick: because that in the accustomed and hitherto admitted Journey, (much the longer way) the Virtue of the Medicaments would easily be enervated. § 30. Fifthly, how many things, as Hairs swallowed with Meat and Drink, are pissed forth with Urine, than which nothing is more ordinary: Hildanus his Cause, is not sufficient here; and indeed many things voided by Urine, would appear almost Miracles, did not the late invention of this way shew the truer Cause. § 31. Sixthly, How Chylus, and a kind of milky Serum or Urine is often voided, as Platerus does testify concerning himself, who had a long time experience of it, without any hurt or inconvenience: and also how the matter of hidden Apostems of the Mesentery are evacuated,

sometimes in the form of milky Urine, and sometimes like a kind of matter. § 32. Seventhly, why Diuretick and Nephritick Medicaments make such an Impression of smell and colour in Urines, as is manifest in Cassia, Turpentine, Juniper, and other like things.

An Appendix concerning the
Venæ Lactææ.

§ 33. We have already given a brief discourse of these Veins in cap 3. sect 12. of this Book, to which we refer you: but these following things we thought necessary to add: viz. first, the distribution of the Lactææ of the Mesentery to the Liver: secondly, the distribution of the Lactææ to the Thorax: thirdly, the distribution of the Lactææ to the Womb in Women: fourthly, the distribution of the milky Veins to the Duggs in Women. § 34. I. The Lactææ running to the Liver. Many of the Lactææ of the Mesentery, coming through the Pancreas, or greater Glandules, and the sides of the Porta are grafted into the very Liver, as Fallopius in his 3d observation of the Veins has declared, and who ought in this Case rather to be believed than the ingenious Pecquet: Moreover Asellius the first finder-out of the Lactææ, declared their Insertion into the Liver, which he delineated in two branches. After Asellius almost all Anatomist have observed the same: among which Waleus observed in great lean Dogs, that some of the Lactææ by a continued passage did end in the

Mesenterick branch of the *Vena Porta*: Some in the *Cava* of the Liver; and some few in the *Vena Cava*, near the emulgents. *Higmore*, a very learned and accurate Man in *lib. I. pag. 2. cap. 7.* observed the *Vena Lactea* coming from the *Pancreas* in great branches, and passing every where through the sides of the *Vena Porta*, did in some places environ it like a ring, not only with two branches but with more, yea with seven, which may be easily seen after Death: they enter under the hollow of the Liver, and from thence are carried into the *Parenchyma* of the Liver, where they are dispersed every where till they are lost: and of this opinion was *Kyperius* and *Regius*, as is expressed, *cap. 3. sect. 12. § 5, 6, and 7.* aforegoing: where *Bartholine* saith, Their entrance is about the third Lobe of the Liver, which is lesser and softer, which a milky and white branch, full of a milky humor, and big enough, (proceeding from the great Glandule) did enter, and to which many of the *Lactea* from the *Mesentery* and *Appendices* of the *Stomach* did come. § 35. That the *Chylus* goes to the Liver, (as well as to the Heart by *Pecquers Thoracick Veins*.) *Conringius* has given his Suffrage, who says, That there are otherways as yet unknown, and that it is a thing impossible that it can all go through that passage found out by *Pecquet*; and the little Veins are too few, and too narrow which both by me and others were lately observed to be in-

inserted into the *Vena Porta*, the *Cava* of the Liver, and the *Vena Cava*, whatever *Pecquet* says to the contrary: And it seems fitter for the Nature of things, that the *Chylus* in divers and many places should be mixed with the Venal Blood, than that it should be all made at one and the same time, and place. § 36. II. The Branches of the *Lactea* to the Thorax, from the upper part of the milky Glandules, immediately under the *Diaphragma*, there arises as many milky Branches as there are Glandules, which through the middle of the *Spina*, pierce the *Diaphragma*, and by mutual insertion two of them are joyned about the first *Vertebra* of the Loyns; another branch coming out of the second Glandule, about the twelfth *Vertebra* of the Back, enters a little above the other insertion: but the third, rising from the third Glandule, is to be seen near to the eleventh *Vertebra*, from whence it arises as a solitary branch, through the middle of the Back, by the side of the *Aorta*, and the Vein *Azygos*, between both, under the *Oesophagus*, to which (as they likewise) it is firmly knit by its Membranes. § 37. These milky Thoracicks departing from the *Spinal*, (about the third or fifth *Vertebra* of the Back) through the midst of which they crept all this way, turn a little to the left, and creeping up under the *Oesophagus* and *Aorta*, and under the *Subclavial Artery* and the Glandules of the *Thymus*, they go forward to the left *Clavicula*, and left *Axillary Vein* (and that some

time

times with one branch only, sometimes with three, and sometimes with more (sprigs) and through a certain little hole or holes, according to the number of the Sprigs, they enter the Vein, just where the outward Jugular pours it self forth into the Axillary aforementioned: Sometimes the entry of the Thoracick is under the outgoing of the External Jugular: At the entry of the Thoracick, there is a Miter-like Valve of moist thin contexture, placed upon the hole, in the Concavity of the Axillar, which hinders the regress of the Chylus, and of the Blood downwards, and also of its ascent to the Joynts, because it looks only towards the Heart, and in the hinder part is turned towards the Axillar: See cap. 3. sect. 12. § 4. foregoing. § 38. From hence we learn many things, first, that these Thoracicks carry the Chylus out of the new milky Glandules or Receptacles of the Mesentery to the Subclavials: but the Lactæ Meseraice, carry the Chylus from the Intestines, either to the Receptacle, or to the Liver: these things are demonstrated, first, by Ligature, where, above it, they grow lank, underneath it they swell: secondly, by the Valves looking upwards: thirdly, from the substance of the Chylus it self, which is the same in all respects as it is in the milky Glandules. § 39. Secondly, That the Chylus goes not to the Head nor to the Joynts, but is carried to the Heart with the Blood that runs down in Circulation, where it is changed into the sanguinous humor, as Pecquet the

first Inventer hereof has demonstrated: for 1. Cutting out the Heart of a live Dog, and wiping away the Blood, he found a white or milky Liquor to flow within the Vena Cava, about the right Ventricle. 2. He opened the Vena Cava from the Diaphragma, to the Throat, where this Liquor did appear flowing free from the mixture of Blood. 3. There settled a white Liquor within the Vein, even from the Subclavial branches to the Pericardium, in all things like to the milky juyce of the Mesentery. 4. Bartholine, confirmed the same by an Experiment made with a pair of Bellows, where, by sending Wind and Water into the milky Vein of the Thorax, by a little Pipe beneath the Clavicles, they did rise up and swell, not only the Vessels towards the Axillar Vein, but that part of the Axillar which is towards the Heart; and straight way, the right ear, and right Ventricle of the Heart, and lastly the Lungs by the Vena Arteriosa, was swelled by Water and Blowing. § 40. Thirdly, That the Lactæ of the Thorax, receive their restorative force from Nutriment, Cordials, and Medicaments, out of the Stomach or Oesophagus by the Glandulæ Lactæ, and carry them straight way to the Heart: whence it is, That drinking Vinegar, Wine, Cordials, and other like things, so immediately the strength is restored; and presently at Meat a Man is strengthened, and his hunger stayed; this Virtue is conveyed by the milky branch which is near the Oesophagus, and

the short passage of the rest of the *Lactea* to the Heart. Allo vulnerary Potions and Pectoral Drinks come a shorter and surer way to the Heart and Lungs, which by the long ways about through the Bowels and Veins, they could not come so safe and secure; and by the same reason Poysons as swiftly overcome the Heart, infect the Vital Spirits, and destroy their Harmony. § 41. Fourthly, From hence appears the *Origination of several Diseases*. 1. *The consent of the Stomach with the Heart* is clear, which has been hitherto controverted, so that we need not fly to the Nerves, and other obscure ways, since these are more apparent. 2. *Syncopal Feavers* (which may have a beginning from raw humors) may have their Fountain here, and may be produced by things immediatly received in. 3. *The Palpitation of the Heart*, by eating of too much Food, or drinking too much Drink; whence a super-abundant wheyish humor arises. 4. *The Dropsy of the Brest*, whose Causes lay formerly in obscurity. 5. *The change of the Pulse after Meat*, which therefore ought not to be taken notice of by a Wise Physician, for that it is caused by the *Obstruction of these Veins in the Thorax*, whence the Blood which would be otherwise plentiful, cannot be diluted, but coagulates or thickens. 6. *The Cause in part of an Atrophia of the Body, loss of Appetite and Vomiting in crooked persons, who have a hunch on the Back*, either outwardly, as in a Gyboseite, or in-

wardly, or latterally, because by the distortion of the Joynts of the Back, the milky Veins of the Thorax are oppressed. § 42. Fifthly, *That as the Chylus is both carried by the milky Veins of the Thorax to the Heart, and by the Lactææ of the Mesentery to the Liver; so that both the Heart and Liver share the Work of Sanguification between them, and that promiscuously*, when the Vessels carrying to both are free from Obstruction: yet some suppose that the Heart receives the thin Chyle, the Liver the thick: for that it seems to be most reasonable that the Liver should draw that part of the Chylus, which is most slowly and last concocted in the Stomach, which is indeed always the thicker: the Heart having drawn the thinner first (before it receives its full perfection in the Stomach) by Pecquets Veins, that by a sudden change, it might be transform'd, for the comforting of its self, and restoring of the Body. And this seems to be reasonable, because 1. *in the ordinary Course of Nature*, it is not contrary to the Economy of our Bodys to draw humors of the same sort two ways: so the thinner Blood is strained through the Septum of the Heart, out of the right Ventricle into the left; and circulates the thicker and more abundant part through the Lungs: And Pecquet himself grants, That a part of the Chylus goes by a Chylous path to the Heart, and the wheyish part to the Reins. 2: By *hinderling the Sanguification of the Liver*, either by the incoming of some

some *Chylus*, because all the *Chylus* comes to the *Thorax* by new passages, there comes suffocation many times, and difficulty of breathing: so *Piso* tells us of one who died of a stopping of his Breath, by reason of the hurt of the Sanguification of the Liver; for the Body being opened the Liver was found *Scirrhus* and the Spleen turned into matter.

3. That the Liver being sound should make Blood, when the Heart does suffer, and the Veins of the *Thorax* do bring no *Chylus*, either by reason of the passages being stopped, or streightened: Or by default of the Heart which receives it: Or, of the Lungs moving: Or, of the *Diaphragma*, or Muscles of the *Thorax* and other parts: So also that the Heart should do the same work, the Liver being diseased: A German Soldier mentioned by *Bontius*, lived a whole year, after that his *Omentum* and *Mesentery* were quite consumed, in whom truly there was no distribution of the *Chylus* through the Liver: but probably it was distributed through the milky Veins of the *Thorax*, inserted into the *Cava*, and the *Oesophagus*.

4. That there ought to be a proportion, between the milky Vessels, and those Vessels which receive the *Chylus*, whether it be the Heart or the Liver: But there is no proportion between the *Lacteal* passages of the *Pancreas* and those of the *Thorax* to the Heart, or Liver, if either the one, or the other do only carry *Chylus*: the milky passages in the *Thorax* are little enough, and the little holes

to the *Axillary* Veins, are too little also, to admit of the carrying through of such a great quantity of *Chylus*: And the *Lacteæ Mesentericæ* which go from the *Pancreas* to the Liver, are yet lesser, than they are in the whole *Mesentery*: whence it is, that neither this way nor that way, all the *Chylus* can be carried; but partly this way & partly that way: for a part of the *Chylus* descends to the Heart by *Pæquet* his Receptacle; and a part of it to the Liver, either out of the *Pancreas* immediately, by *Asellus* his milky Veins: Or mediately, by the *Vena Portæ*, *Vena Cava*, and the *Emulgents*. § 43. Sixthly, That since Nature has so exquisitely divided the double Insertion of the *Chylous* passages, (because the Chyle was to be brought to two Organs of Sanguification) and that in the right side she has fram'd the Insertion of them into the Liver; She has indeed placed almost nothing in the left, but the entrance of the milky Veins of the *Thorax*.

44. III. The distribution of the *Lacteæ* to the Womb in Women.

These Veins are plainly described by none, but late Anatomists conclude their reception, from the opinion of the great *Hippocrates*, who saith, in his Book of the Nature of Children, That Milk, to wit, a white nutritive juyce does flow into the Womb, for the nutrition of the *Embryon*, and that it is attracted in the Womb, by the Mouth of the *Embryon*: This assertion the learned *Harvey* has defended by many Arguments, which we shall not here recire; but the Milk

or *Chylus* flowing out of the Womb, as *Laurentius* in his *Anat. lib. 2. Quest. 10.* Witnesses, where he saith, He has seen very many Women with Child to have pissed through their Womb and their Bladder, a great abundance of Milk, is an Argument of great force in proof hereof; which the said *Laurentius* ascribes to the correspondence of the Womb with the Dugs: But *Bartholine* rather ascribes it to these common milky passages, for that he had seen in Women with Child, near the time of their Birth, a matter to have flowed to the Womb, most like to Milk in colour, substance and consistence, which Midwives take as a certain sign that the Delivery is nigh. Also *Johannes Hornius* saith, That *Saffron* goes speedily to the Womb, insomuch that a Woman not being able to bring forth giving her a little *Saffron*, the Child came forth, dyed of a *Saffron*, colour: Another like Observation has *Henricus ab Heer*, of a Woman who taking *Saffron*, did in half a quarter of an hour bring forth a Boy, coloured with a *Saffron* dye. § 45. IV. *The progression of the Lactææ of the Thorax to the Dugs.* That the milky Veins of the *Thorax* go to the Dugs, is not in the least to be doubted; and there are many evidences, which, together with *Hippocrates*, do perswade us that the *Chylus* is protruded to the Dugs: For Nurses confess, that when they give suck, the Milk does as it were come from the Shoulders (there where the *Lactææ Thoracicæ* are inserted) with some kind of pain, and they

are careful not to let the Child suck immediatly after, least it should receive the Nutriment unconcocted, Nurses have also taken Purges, which have purged the Sucking Child strongly, while the Nurse her self, has not been purged at all; and this has been observed by *Hippocrates*, *Teophrastus*, *Dioscorides*, *Varro*, *Masarius*, *Aristotle*, and others; Hairs also have sometimes been swallowed down in Drink, which have been voided out by the Paps. If you desire to know the ways by which these things are done, *Martianus* says, That they are hidden ways to and from the Duggs: *Castellus* thinks, That the matter of the Milk is carried from the Stomach to the Paps by ways as yet unknown. *Veslingus* also allows of many unknown ways. *John Daniel Horstius*, has distinguished red and milky Veins in the Paps. *Benedictus* defends *Hippocrates* his Veins passing to the Paps and Womb, but is satisfied in the correspondence of the Paps with the Womb. But the famous *Bartholine* saith, That nothing is more easy than by these new lacteal Veins of the *Thorax* to end the controversy, for that they are approximate to the the Vessels of the Dugs and *Thorax*, and diffuse their branches every way, which (saith he) may easily be found in a Woman that is great with Child or gives Suck, cutting her up after repast. *Riolanus* did indeed see in a Woman newly brought to Bed, an internal *Mammary* and *Epigastrick* Vein, as big as a Goose-Quill: But these *Lactææ* going to the Dugs

Dugs, are not easy to be seen, because (saith *Auxotius*) of the position of the Vessels.

VIII. Of the Pancreas or Sweet bread.

§ 1. It is called *πανεέας* ex *πν* and *εέας*, (as if the part was all Flesh; whereas, it should rather be called *πανάδην*, or *πανώσινωδης*, All-Kernel, for that its substance is wholly Glandulous: It is also called *χαλλινεέας*, the Sweatbread, or White-bread, from its pleasantness and colour. § 2. Its situation is in the left side under the lower part of the Stomach, or bottom thereof, the Duodenum, and *Vena Porta*, as far as the Regions of the Liver and Spleen: it is joyned to the Duodenum into which the late invented passage, called *Ductus Wirsungianus*, from the Author *John George Wirsungus* of Bavaria, who did (Anno 1642.) at Padua, first find out this *Ductus Pancreaticus*, in which Choler is said to be sometimes found, but never Blood. § 3. It is loose and shapeless, and of a very spongy substance, made up of many Glandules, all which have so great a hardness and strength, that being separated from each other, they do still retain their proper form; and being put together by reason of their loose joyning) do make a soft Body. § 4. It has a Membrane from the Peritonæum, by which it is covered or holden up, to which (about the uppermost Vertebra of the Loyns) it is firmly connected or tyed. § 5. It is supplied with Veins from the splenetic branch; with Arteries from the left branch of the Arteria Cœliaca; and with Nerves from the

(sixth but our) ninth pair, to wit, from those branches which pass to the Stomach and Duodenum. § 6. Its figure is oblong, in length it is from five to eight or nine inches, which in men of perfect health it seldom exceeds: in breadth it is from two to three Inches, or according to *Riolanus*, as broad as the Palm of the Hand: In thickness it is about an Inch or something more: and the weight of it is for the most part in men 4 or 5 ounces. § 7. The new Ductus Pancreaticus before mentioned, seems to be derived from the Parenchyma of the Pancreas for as much as each glandule constituting the Pancreas sends forth small vessels, which meeting in in the middle thereof, constitute this large ductus. It seems to be membranous, and although small, yet sufficiently strong, Its bigness where it enters the Duodenum is about the greatness of a small Goose-Quill called a Pinion: but in its progress towards the greater and lesser lateral branches, running to all the Glandules of the Pancreas it is divided and gradually lessened, till by infinite little branches it is terminated towards the Spleen, but enters not into it. § 8. This Ductus has been found sometimes double, a short one in the ordinary place, and beneath it a larger: but for the most part it is single. § 9. Its orifice opens widely into the Gut Duodenum, near the entrance of the Gall-passage, with which it is sometimes joyned by one and the same Mouth, but more frequently by a different, but neighbouring Circle: before its egress

saith *Bartholine*, There is a little *Valve* scituate, which looking outwards, keeps the Probe from entering this new passage, being thrust in by the *Duodenum*, but this assertion by *De Graaf* is denied, who saith, It is rashly and falsely affirmed. § 10. By this *Ductus* the *Pancreatick* juyce discharges it self into the *Intestines*, about four Inches under the *Pylorus*, being for the most part joyned to the *Ductus Biliaris*. He who first eminently took notice of this juyce, was the famous *Fraunciscus Sylvius*, and after him the aforementioned *De Graaf*, who has publickly demonstrated the same. § 11. This juyce is found clear like water, with something of visciditv: and in Taste sometimes almost insipid, sometime acid, sometimes austere, and sometimes salt, and acidly salt. § 12. This juyce is thought to be made of a matter separated from the Blood, but conjoyned with the Animal Spirits by a continual Circulation: and it is effused in the Glandules of the *Pancreas*, after the same manner as Spittle in the *Salivales*, being continually cast into the *Duodenum* a little below the *Pylorus*, and there mixed with the *Chylus*, which has already passed the fermentation of the Stomach, and with the same it is driven down by the *Peristaltick* motion of the Guts; in which Propulsion, the greatest part thereof, together with the more pure and thin part of the *Chylus* is carried to the *Venæ Lactææ*, thence to the receptacles of the *Chylus*; with which it is mixt, and convexed to the Heart, both immediately by

the *Lactææ Thoracica*; and mediately by the *Lactææ Mesenterij*, through the *Portæ*, Liver and Cava. § 13. To this opinion *Mœbius assensu*, who saith, That this *Pancreatick* juyce, seeing that it may be admixed with the *Chylus*, together with *Choler* in the *Duodenum*, does without all doubt farther help and promote its fermentation: for, it it should be of no use, Nature would have derived that Channel to the lower *Intestines*, wherein hard and unprofitable Excrements are lodged, and not to the superior, where the *Chylus* begun in the Stomach ought to be perfected. § 14. That this fermentation and effervescency is excited, from the mixture of the acid *Pancreatick* juyce, and alcalious *Choller*, we dare boldly assert, because we never yet have seen an acid Spirit to be joyned with a lixiviate Salt, where such a fermentation and effervescency have not been sufficiently manifest: That *Choler* is of the nature of an *Alcaly* is apparent, for that Chymically there is separated from it alcalious Salts both volatile and fixed: and that the *Pancreatick* juyce is gratefully acid, has many times been proved by the Taste. § 15. If it be objected, that this juyce is found sometimes insipid, and therefore can cause no such effervescency: to that we Answer, 1. That sometimes it may be dull or vitiated and so not perform its duty, as is often found in many unhealthful Bodies, and may afterwards return to its just state again. 2. That in mixed Bodies various qualities may be

so hidden, as to be wholly imperceptible to our Senses : As for Example, Spirit of Vitriol or Sulphur is a mighty acid, yet may it be so qualified by Spirit of Wine, that its acidity shall not be at all perceived ; notwithstanding which, it will not fail to make an Effervescency, if an Alcalious Salt be mixed with it ; the same thing may happen in the Pancreatick juyce. § 16. But it may be objected, that this juyce is sometimes acidly Salt, and therefore cannot so easily ferment : to which we say, That this can in no wise hinder the Effervescency, but rather make it much greater ; as you may see, if you dissolve Sal Armoniack in Oyl of Vitriol, the Oyl will be so highly accuated as that it will dissolve Gold, which without the Salt it could not do. § 17. The various uses of the Pancreas. They are first, to prop up, and support the Vessels passing through it, as the branches of the *Vena Portæ* ; of the *Arteria Cœliaca* ; and of the Nerves, especially the *Ramus Splenicus* : Secondly, to help and assist the Concoction of the Stomach by its heat and moisture : thirdly, to suck out the wheyish Blood, or Lympha, which passes along that way ; fourthly, to be a stay to the Liver, and (as it were) a Cushion to the Stomach for to rest upon.

An Appendix, concerning the Glandules of the Body.

§ 18. The Glandules of the Body. (according to the famous Sylvius) are of two kinds, viz. Conglobated

and Conglomerated. § 19. Conglobated are those which are constituted, as it were, from one continued substance, having an equal superficies, and these are they in which the Lympha is generated, and from whence the Lymphatick Vessels do proceed, which are distributed throughout the whole Body. § 20. Of this kind of Glandules, the chief are those in the Mesentery, to wit, the Chylous Receptacles : into which the Lympha is cast to be conveyed with the Chyle. § 21. These are clothed with a Coat or Membrane, and in the ordinary course of Nature have a Cavity in the middle, as is noted by Nicholas Stenon in his Anatomical Observations : Outwardly (saith he) the conglobated Glandules are hollow, not inwardly like a Bason : yet if you rightly enter the separation between the protuberating Lips on every side, you shall find as it were a Cleft or Chap, by which go forth certain lymphatick Roots returning with the Membrane. § 22. These Conglobated Glandules are given to the Lymphatick Vessels, which carry a watery Liquor, whose motion is not from the Center to the Circumference, but contrariwise, as by the Valves in those Vessels in particular may be proved. § 23. This Liquor in all the Conglobated Glandules, is of one and the same Nature, which is proved not only by the substance of the same Glandules, every where consimilar ; but also by the ways by which they are all disburthned, for that they all end in the *Ductus Thoracicus*

cicus : and it is farther proved by the Liquor of the conglobated Glandules, which is ordinarily more salish and less acid than in the conglomerated Glandules. § 24. Whence the Lymphatick Vessels arise ; their double insertion into the Ductus Thoracicus both above and below ; their substance, figure, magnitude, and Valves ; as also their situation and progression, we shall more fully declare hereafter in cap. 12. sect. 12. § 4, 5, 6, 7, 8, 9, and 10. following. But this note, That those which come from the Liver and Bladder of the Gall, run the same way, in company with the Porta. § 25. These Lymphatick Vessels are almost as numerous as the Arteries : and they carry the Lympha in order to a purpose of sanguification, as in the place newly mentioned § 2. we shall more fully declare : but if this Lympha abounds in too great a quantity, or becomes of an evil quality, or is vitiated, it is either protruded in frequent Sweats, or else (if it be not carried off by some other means, as by the emulgent Vessels, Kidnies, &c.) it causes an Anasarca or Lymphoplegmatia, by diffusing it self through its Venal Pores into the flesh and habit of the whole Body. § 26. The Conglomerated Glandules are those which rise from many lesser Glandules joined together : such are the Pancreas, Salival Ducts, the Thymus, and many others in the Fauces and Nostrils. § 27. In these a peculiar Liquor is generated, not carried into passages common to all, but peculiar to each ; and those ending in

Cavities or Ducts appointed to every one of them : As the Salivales which bring the Spittle into the Mouth from the Maxillary Glandules : the Ductus Wirsungianus, which conveys the Pancreatick juyce into the Guts, &c. § 28. They are also clothed with a Coat or Membrane which being taken away, and a certain liquor emitted (suppose in the Pancreas, through the Ductus Wirsungianus : in the maxillary Glandules through the Salivales ;) by the help of a fit Syringe, and several little Pipes affixed to the same, you will see an admirable Spectacle, the Conglomerated Glandules, receding or parting by course one from another, specially if the little Membranes whereby they are connected be cut with a Knife. This you can in no wise find in the Conglobated Glandules, if you use the greatest diligence. § 29. In the middle of these Conglomerated Glandules no Cavity is to be found ; and they dispose of their Liquor into peculiar Cavities, as aforesaid, viz. the Salivales into the Mouth ; the Pancreas into the Duodenum, &c. § 30. The Liquor separated in all the Glandules whether Conglobated or Conglomerated, is one and the same, but by the fermentum of each particular Vessel, it is made to differ, as hereafter, in our discourse of the Gall, we shall more fully prove : now as the fermentum in the Conglobated is all one, so their Lymphatick juyce is all one, but because the Fermentum of the conglomerated is different ; so their juyces differ not only from

the juyce of the Conglobated, but also one from another. § 31. So the juyce of the Pancreas is found more acid and less salish; than that of the Lacteal receptacles: but that is more acid, and more salish than that of the Conglomerated Salivals: for the Salival juyce is either temperate, or insipid; but the pancreatick juyce is either acidly Salt, or such as we have before at § II. 14, 15. and 16. declared it. § 32. This juyce of the Conglomerated Glandules, being effused through particular Ducts, into divers Cavities of the Body, is there mixed with another matter designed for nourishment. § 33. For that which is generated in the Maxillary Glandules, & other of the Conglomerated, placed about the Cavity of the Mouth, for the most part absolveth the fermentation of Food in the Stomach: for the Spittle in the Maxillary Glandules both superior and inferior (which some will have to be separated from the Blood) is carried by the said Salival Ducts into the Mouth, where, in eating it is mixed with the Food; and out of the time of eating is continually swallowed (as indeed it ought to be:) for that the Mouth is very soon filled with Spittle, which being continually spit forth, would very quickly make the Body dry, and bring upon it an Atrophia, or Consumption; hence it is commonly said, that such as are in a Consumption spit much. § 34. The juyce also which is generated or separated in the Conglomerated Glandules of the Pancreas, seems also to perform the same work a second time, viz. to make a second fermentation of

the Chylus in the small Guts, as we have already declared in § 12. foregoing. § 35. For it is demonstrable to the Eye (in live Anatomies) that a sufficiently large quantity of this Pancreatick juyce is continually brought to the Duodenum, that it may continually make a fermentation with the infused Choller. § 36. From all that has been said it appears, that the juyces of all the Glandules in the Body, whether Conglobated or Conglomerated serve in their places to a purpose of Sanguification. The first, immediately, by its mixture with the Chylus, in its receptacles of the Mesentery: The last, mediately, by its mixture with the Aliment, in order to a fermentation, whereby the nutriment may be made Chylus, afterwards to be transmuted or changed into Blood by the Sanguifick properties of the Heart & Liver.

IX. Of the Liver.

§ 1. *Ἡπαρ, Hepar, Jecur*, the Liver, so called in Greek, from want or Indigence, because it supplies the wants of the parts of the Body: but the Latin word *Jecur*, is as if you should say *juxta cor*, near the Heart. § 2. It is an organick part, and an Instrument of the Blood (both for generating and perfecting it;) seated in the Abdomen, just under the Diaphragma or Midriff, in the right Hypochondrium, about a fingers breadth distance therefrom; is covered by the Ribs for safety, but covers, or lightly rests upon a great part of the Stomach. § 3. Its number is commonly but one, seldom two; but is divided as it were into two parts by the Umbilical Vein; which

which after the Birth serves it for a Ligament. § 4. *It is said to be the original or beginning of the Veins, because therein the roots of the two greatest Veins appear dispersed, viz. of the Cava and Portæ, as roots implanted in the Earth; also here are to be seen inserted, trunks and branches of the Vene Lactææ, arising from the Pancreas Mesenterij.* § 5. *It is a great thick, and hard Body, of a red color, consisting of a substance proper to it self, fitted and ordained for that end, being almost like to congealed Blood.* § 6. *It differs from the Livers of Beasts, in that it has seldom any Lobes, yet the hollow part of it has a Fissure or Chink where the Umbilical Vein, as aforesaid, is implanted, and two small bunchings-out in the right part where the Portæ comes out, called by Galen πύλας, Gates, whence the name of the Vein: besides these, there is a little Lobe, of a softer and thinner substance, than is the rest of the Liver which is covered with a Membrane, and by which the Liver is tyed to the Omentum, by which Spigelius lib. 8. cap. 12. thinks water may be discharged out of the Liver into the Caul: In this third Lobe, Bartholine did observe certain milky Veins inserted, in the cutting up of Fishes.* § 7. *As to Figure, it is almost round, on its upper part Convex or Gibbous, even and smooth, (that it might not hurt the Diaphragma, or Septum Transversum) where also there is an oblong Cavity behind at the passage of the Cava: and because of the Stomach, its lower side is Concave*

or hollow, and almost of a Spherical form, which is called its Sinuous or Saddle-side; being more uneven than the other, and having in it 2 hollowneses; one on the right hand for the Gall-Bladder, another on the left, for the Stomach to lean against. § 8. *Its magnitude is exceeding great, beyond all the other Viscera; and bigger in Man than in any other living Creature, the proportion of Body being considered; and this seems to be necessary, considering the noble uses and Functions to which it is ordained, viz. to the generating and perfecting of the Blood: its greatness is commonly known from the length of the Fingers.* § 9. *It is connected or tyed by three strong Ligaments, first by the Vena Umbilicalis to the Belly, or Muscles of the Abdomen, by which it is stayed from being pulled upwards. Secondly, by the Ligamentum Suspensorium or hanging Ligament (which is membranous, and thin, but broad and strong, arising from the Peritoneum,) to the Diaphragma above on the right side; this passeth transversely by the Liver to the hinder parts. Thirdly, by a second Ligament from the Peritoneum, which is round and very strong, (giving to the Liver its Coat,) it is tyed to the Mucronata Cartilago, to hinder it from falling to the back parts: Or to the Diaphragma above, on the left hand. It is also tyed by small Fibres to the short Ribs to keep it steady. In its Concave part it is tyed by the Mesentery to the Ribs by the Vena Cava. § 10. It*

is covered with a very thin Membrane, springing from its third Ligament, which cleaveth firmly to the substance of the Liver. If this Coat be separated at any time by a waterish humor, issuing out of the Vessels from the fleshy substance, waterish Pustles are ingendred; if these break, the water falls into the Cavity of the Abdomen, and causeth the Dropsy Ascites. § 11. It has an innumerable company of small Arteries dispersed from the Cœliaca, through its Concave part, to nourish and warm it with the heat of the Heart; and Nerves from the Spinal Marrow and from the Par Vagus, the (sixth but) our ninth pair; these are said to be but two branches and they small, because the Liver hath but a dull Sense. § 12. Its Veins are from the Cava and Portæ: The branches of the Cava are scattered for the most part through its Convex part: These roots of the Cava above and in the forepart, do altogether make up one Trunk, before the going out whereof certain Circles are placed, here and there in the greater branches, being of a membranous substance; and very like to Valves; sometimes thicker, other times thinner and like Cobwebs, first discovered by Stephanus, and after by Conringius in an Oxes Liver: afterwards as soon as this Trunk comes to the Surface of the Liver it is divided into two great branches, the ascending and the descending; and from hence it is said that the Cava arises from the convex or upper part of the Liver. § 13. The Vena Portæ

springs from the lower and hollow part; and its roots do by little and little towards the lower part both greater and lesser, gather together, until they make one Trunk which is called Vena Portæ or the Gate Vein. § 14. So that in the Liver its chief and greatest Vessels are the roots of the Vena Cava and Portæ, whose Anastomases, Inosculationes or Conjunctions are specially to be observed: yet all the kinds of Anastomases are not apparent to the Eye in Dead Bodies: but the certainty of these Inosculationes out of the smallest branches of the Portæ, into the smallest of the Cava, waleus proved, in a Liver blown up with Wind, after the flesh was taken away, and floating upon water: and by these unions of the roots of the Cava with the Portæ, the Blood may pass through and by them the offending matter passes when we evacuate by Purgation; not that it is carried out of the Portæ to the Mesentery, as has been hitherto believed; but so as thence to pass through the Heart, and be emptied out through the Celiac Arteries; and from thence through the Stomach or Gall passage into the Guts, and so forced along by Virtue of the purging Medicine. § 15. The action of the Liver is sanguification, for the Chylus being conveyed to the Liver by the Vena Lactea, is there sanguified, or made Chymus; for the substance of the Liver doth not only sustain the Veins, but is also the efficient of sanguification, and of perfecting the Blood by its circular motion; and together with the Blood

Blood it generates natural Spirits.

X. Of the Gall-Bladder, and Canalis Biliarius.

§ 1. Κύστις χοληδόχου, *Vesica biliaria*, seu folliculus fellis, the Gall-Bladder: and πύξινος χοληδόχου, *Canalis biliaris*, the Choller Channel, are scituate on the right side of the Liver, in the under or hollow part thereof. The branches of both these together with the branches of the *Vena Portæ* are comprehended in a common Bladder, called by *Dr. Glisson*, *capsula*. § 2. These branches of the *Vesica fellis*, and *Ductus Choledochus*, or *Biliarius* being detained in the Liver, are dispersed through its whole *Parenchyma*, every where included in the aforementioned *Capsula*, which is red, about the thickness of an Artery, and taking its original from the *Peritoneum*. § 3. The Gall Bladder is a Vessel long and round, much like a Pear, hollow furnished with a double Membrane, the one whereof is fastned to the Liver from the *Peritoneum* (being the same with which the Liver is covered) without *Fibres*, and wherewith that part only which hangs without the Liver is covered: the other proper and more thick, but strong, having all manner of *Fibres*, which a certain crust compasses about, bred of the Excrements of the third digestion, to keep off the sharpness of the Gall. § 4. Its magnitude is small, compared to the Spleen or Kidnies, being about two Inches in length, and in some persons nearly three Inches. § 5. It consists of two parts, to wit, the Neck, and the bottom: the Neck is harder than the bottom, and higher in

scituation, looking upwards which from the bottom by degrees grows long and narrower until it ends in a very small and narrow passage, viz. the *Ductus communis*, which goes to the beginning of the *Jejunum*. This elongation of the *Vesicula fellis* is called *Meatus Cysticus*, because it springs from the *Cystis*. At the Neck is observed first a certain peculiar hollownes, and also certain little Valves or Membranes, sometimes two, sometimes three, which hinder the Regrets of the Choller. § 6. The bottom of the Gall Bladder is round, and seated lowermost, when the Liver is in its natural scituation. § 7. The Gall Bladder has two very small Veins, called *Cysticæ Gemellæ*: also sprigs of very small Arteries from the *Cœliaca*, to nourish it, and preserve its heat: & a little Nerve scarcely visible, from a branch of (the sixth but) our ninth pair, to give it Sense, which Nerve also runs up and down the Coat of the Liver. § 8. The Gall Bladder receives also a very many small passages (which may be called *strainers*) furnished with sundry little twigs, scattered up and down in the Liver, between the roots of the *Cava* and *Portæ*, which afterwards being joyned into one passage, does carry that part of the Serum or watery juyce of the Blood, which makes Gall, into the Gall-Bladder; which daily disgorging it self into the *Duodenum*, is continually filled again. § 9. The use of this Bladder is to hold the Gall: and the use of the Gall is, 1. To cause a new and more perfect fermentation

of the Chylus. 2. To prick the Guts by its sharpness, to stir up their Peristaltick motion, that they may drive down the Chylus, and expel the Excrements. 3. To mix with the Chylus in such proportion, that being converted into Blood, the Blood might thereby be kept from congelation, as more at large is explicated in cap. 12. sect. 3. § 7, 8, 9, and 10. following. § 10. The other receptacle of Choller, called *Canalis* or *Porus biliaris*, *Ductus Choledochus*, *Ductus Hepaticus*, *Meatus Hepaticus*, the Choller passage of the Liver, is a Vessel round and long, and its passage is twice as large as the Neck of the Gall-Bladder, going right out from the Liver (being sometimes forked, yet so that its two branches as *Riolanus* has observed, do soon become one again;) this *Meatus Hepaticus* arises from innumerable branches, (which may be called Strainers) coming from the roots of the *Vena Cava*, which being gathred together and united, make one branch, and so constitutes this *Ductus Hepaticus*, which is at length joyned with the *Meatus Cysticus*, and with the same makes up the *Ductus Communis*, by which the Gall passes into the Guts. § 11. This *Ductus Hepaticus* receives a watery part of the Blood through its Strainers, which by virtue of the Fermentum of the part is converted into Gall, (for the use of Nature.) This portion may be sent this way, because it may be more than what the Gall-Bladder is able to receive. § 12. The *Ductus communis*, or common pas-

sage by which both the Gall Bladder and the *Meatus Hepaticus* empty their Choller into the Guts, arises from the Inosculation of the *Meatus Cysticus* and *Meatus Hepaticus*, and from thence goes straight forwards, and is inserted into the ending of the *Duodenum*, or beginning of the *Jejunum*, obliquely, between the two Membranes of the Intestine, about two inches distance, before it perforates the second Membrane. § 13. Sometimes this passage (though but seldom) goes to the bottom of the Stomach, whence proceeds Vomiting of Choler, and such persons are called *μερόχολοι ἄνω*, Choller Vomitors: sometimes it is inserted into the end of the *Jejunum*, whence proceeds Cholerick Loosnesses, and such persons are called *μερόχολοι κάτω*, Choller purgers.

An Appendix concerning the Gall, or Cholerick humor.

§ 14. How the Gall is generated, or how (as Authors say) it is separated from the Blood, I have met with none yet which has declared: but all conclude that it is separated from the Blood in the Liver, through the aforementioned Strainers, and so sent into the Gall-Bladder, &c. Now here we think one Query necessary to be Answered; Why these Strainers should only draw Gall, and not also equally both *Lympha* and *Serum*? and why those Strainers which separate the *Lympha* and *Serum*, should not also promiscuously draw or let through all the three juyces?

§ 15. This

§ 15. *This Question no Mortal has satisfactorily answered, that we know of: and the most ingenious Pecquet, one of the last Writers of Anatomy, has declared his Ignorance thereof, in these Words: How the transcolation of the Bile from the Blood into the Gall Bladder is performed, and the cause of so great a Wonder I confess, are hid from me. unless that we should admit for a sufficient reason, the diversity of Figures which is in the Straining Bodies, and in the Bodies to be strained. And of this opinion was Regnerus de Graaf, in his Book de Succo Pancreatico, when he undertook to give a reason of the Separation of the Lymphatick juyce from the Blood. But into how great an Error these Men have run themselves, especially De Graaf, we will leave to be shewn by the most famous Franciscus Sylvius: and the Error of Graaf was so much the greater, because he had beforehand the unanswerable refutation of Sylvius his Quandam Master, the which we will here deliver Verbatim, translation only excepted, as you may find it in, lib. I. cap. 49. sect. 25. of his new practical Idea of Physick: § 16. The figures of Pores (saith he) undetermined, and yet very pleasing to its Authors, does not satisfy my Mind, desirous of Truth, because it is not proved by forcible reason, nor so much as ever made probable by any Man from manifest experience: for that which is said by several of dry or solid Bodies sent through a Sieve having holes of a differing shape, doth nothing urge as to liquid and moist*

things: nor is it true as to solid Corpuscles, which are carried equally through round holes, Spherical or Cylindrical, or of any other Elliptical or Oval form; yea any Corpuscles of whatsoever figure they be may pass through the hole of any figure, if the said Corpuscles are less than them. But take it for granted according to pleasure, I know not through what Figures of Pores, likewise feigned, because not determined by any in the Parts or Bowels of our Body, that some particles of the Blood should pass and not others, since all the Parts and Particles thereof are fluid, and continually flowing through insensible little Arteries and Veins: Whether this be not to obtrude new Chimeras (instead of finding things out,) to be believed by credulous men, let such as are judicious and Ingenious judge: Thus Sylvius. § 17. The figures of Pores being thus demonstrably refuted, and no other cause, reason, or way declared or known, it follows, that as to the performance of that separation, the Sons of Art are yet in Ignorance. However being desirous of the Truth, we have applied our Thoughts to the search of this Mystery, and doubt not but in what follows to investigate the Solution of the Problem, to the satisfaction of all the Lovers of Art. § 18. In order to the clearing of this thing, we shall first, do our endeavour to prove that there is no such thing in Nature, as the Separation of Gall from the Blood: and then we shall shew what that humour is which is separated from the Blood; and how therefrom, the Gall and other juyces of the Body are ge-

generated. § 19. *That there is no such thing as the separation of Gall from the Blood, appears from the following reasons ; first, from the unanswerable refutation of the Figures of Pores, above declared by the most excellent Sylvius. Secondly, from the Ingress of the Gall into the Jejunum, and its mixture with the Chylous juyce, in order to its better fermentation, from whence we conclude, That as Nature does none of her acts in Vain, so she does nothing upon design to undo it again, as she must here do, if any Gall be separated from the Blood, although in the least Measure. Thirdly, because that a measurable and fit quantity of Gall being mixt with the Blood, is in order to keep it from Congelation, as we more fully declare in cap. 12. sect. 3. § 7. following. Fourthly, That no more than is necessary for that purpose is received in by the Blood, because that although the Chylus may be made yellow as Saffron, by the flux of Choller from the Ductus communis into the Jejunum, yet nothing of that yellowish colour is drawn in by the Lacteal Veins, nor so much as to make the Lacteal Juyce bitter : this Lacteal juyce (out of a desire of knowing the Truth) we have several times both seen and tasted, but never saw it of any other colour, than white, almost like Milk ; nor ever felt it of any other tast than a milkish sweetness : from whence we conclude, That if Nature should cause any separation of Gall from the Blood, she would deprive*

it of that which was intended for its preservation, where by being undone in its Crasis, a Congelation, and total separation of its Serum would follow, and immediately from thence Death. § 20. From hence we Conclude, That Nature is so far from making a separation of Gall from the Blood, that she acts rather quite contrary, and has formed a perpetual Generation of Choller, to mix therewith, whereby it may be kept continually fluid, and in its due Crasis ; as also for other ends and intentions of Nature before declared. These reasons we think sufficient enough at present, in opposition to the vulgar Error not only of the Ancients, but of all our Modern Physicians. § 21. It may then be demanded what juyce that is which is separated from the Blood, in the Liver, and how Nature performs the generation of the Gall ; To which we in short thus Answer, That that juyce which is separated from the Blood is only the fetous and watery part thereof ; and this we have proved by ocular demonstration : for if you bind any of those small Veins or strainers going from the Liver to the Cystis of the Gall ; you shall in a little time see them swell towards the Liver, and beyond the Ligature towards the Gall to be empty, which shews the flux of the humor from the Liver to the Gall : Now if (after the said Veins or Strainers are sufficiently filled) you make a prick, and let out the juyce, you shall find it to be clear as Crystal, and (in a manner) as in-

lipid as water, but with a little kind of *Viscosity*: from whence we conclude, that no Gall is separated from the Blood, but only a Lymphatick Juycce, or viscous water for the Generation of Choller: this thing we have seen in six or seven several Examples. § 22. *And being desirous to investigate Truth, we have made several Tryals in the Lymphatick Vessels, both at their greatest distance from, and when they have approached near to their respective Glandules: wherein we have not only discovered the motion of the Lympha, but also the Qualities of its substance, which (by the best of our senses and discernings) differed nothing from the aforementioned viscous juycce sent into the Gall-Bladder. The like we proved in the Renal streiners, whereby we evidently saw, that the juycce separated in all those several parts, was but one and the same*

§ 23. *Hence the matter of the generation not only of the Gall, but also of the Lymphatick Juycce, and Urine, (which is the sanguinous Serosities) are apparent: How that Generation is made we now come to shew.*

§ 24. *First, We affirm that the Fermentum of any thing, changes another proper and fit Body, into the nature of the ferment: This is proved by Leven, for if you dissolve a fowr Leven, (about the bigness of a large Egg,) in a sufficient quantity of warm water, and mixt it with about sixty pounds weight of Meal, it will in about twelve or sixteen hours Leven the whole and make it fowrish: this*

very whole mass, if it be kept in a warm place, will in about two days time, not only become very fowr, but full as fowr as the little Leven with which it was mixt; such is the mighty power of a proper *Fermentum*. Again, if you take strong and new Ale, or new Ale Yest, to the quantity of one pound, and mix it with an hundred and sixty pounds weight of warm Wort made of Mault, it will in sixteen or twenty four hours change the Wort all into Ale; such a great power has a little quantity of a fit *Ferment*, in the transmutation of a Foreign but proper matter. And the same thing comes to pass in the same manner, with other *Ferments*, if mixed with proper Bodies.

§ 25. *This being undenyably proved to the Senses; it is clear, That these remaining Portions of Gall, Lympha, and Urine, contained in their proper receptacles, all each of them the part of a Ferment, and by their own proper power convert those Sanguinous Serosities, each into their own Natures: so that the said Aqueous juycce of the Blood being strained into the Conglobated Glandules becomes Chylus: into the Pancreas, it becomes acid Phlegm: into the Maxillary Glandules, it becomes Spittle: into the Gall-Bladder, it becomes Choller; and being strained through the Kidnies, it becomes Urine, all which various Liquors it is transmuted into, by the proper ferment (as aforesaid) of each part. And here we think the Problem is solved, and that great Mystery hid from the Eyes of Pecquet (and all other*

other Anatomists) is fully brought to light and revealed. § 26. *It remains now that we shew the rise of the Jaundice; and how, that the affection or disaffection of the Chollerick humour is not always the cause thereof.* It was the opinion of Galen, and others of the Ancients, that it was caused from the regurgitating of Choler by reason of some Obstruction in the cystick passage, or *Meatus Hepaticus*, or in both, or in the *Ductus communis*, by stones, flegm, or some viscous and glutinous matter. To which we Answer, That by reason of the three Valves looking from without inwards, to hinder this recourse of the Choler to the Liver, this regurgitation is impossible: and although the *Meatus Hepaticus* is without Valves, yet seldom in a Jaundice, is either that passage or the *Ductus communis* stopped, but for the most part, they are found rather the wider: besides, if such an Obstruction should be supposed, neither could the *Chylus* be duly fermented, nor would the *Peristaltick* motion of the Guts be excited, nor lastly, would the Blood be kept free from Congelation. § 27. *If with the learned Willis, you suppose, that is caused from the separation of the Choler from the Blood in the Liver, not sufficiently enough conveyed to the Gall, by reason of certain obstructions in that Viscera, whereby the whole Mass of Blood should be contaminated:* We Answer, That we have already proved at § 19, 20, and 21. above, that there is no such separation of Choller from the Blood,

and by § 23, 24 and 25 foregoing we have prov'd that the said Choler is generated of the the sanguineous Serofities of the Blood, in the very Gall-Bladder it self. § 28. *If with the renowned Sylvius, you suppose it to be from the volatilizing of Choler, by a Spirit too Volatile, being plentifully mixed with it, which he confirms by two instances, viz. the biting of a Viper; and the too much drinking of Wine and strong Waters, which many times caused the Jaundice: to this we Answer,* that the biting of a Viper is no demonstration of any such thing, for as much as a person bit by a Viper on the Hand, Legg, or Foot, shall in an hours time or thereabouts be affected with the Jaundice, of which we once saw a pregnant example: and yet the Gall-juyce not affected or disaffected in the least Measure: nor can it in reason be supposed, that the Venom or Poyson of the Viper should be so particularly directed to the Gall, to work such an effect in so short a time, as to distribute that heavy juyce so universally over the whole Body: much less do we think, that either the drinking of strong Liquors, or any violent Exercise, should any ways so operate upon the Chollerick humor, as to Volatilize it, and so immediately disperse it universally over the whole humane frame. § 29. *If it should be supposed to arise from the too liberal dispensation of Choler by the Meatus Communis into the Jejunum, whereby it might overpower the Chylus:* We answer, That this could not be in the

least Measure any cause of the Jaundice, (but rather of a Cholerick flux,) for as much as the Lacteal Veins receive in, only the pure Chyle mixed with only so much Choller, as might serve the Intentions of Nature, and this is evident (by § 19. a foregoing,) because the *Chylus* is neither colored yellow in the Lacteal Veins, nor found to be bitter in Taste, although it be both exceeding yellow and very bitter in the *Jejunum*. § 30. *It may be now demanded of us, what that is, which we will assign to be the cause thereof?* Truly we suppose it may arise from either of two causes, The one is from the Obstruction of the *Mearus Hepaticus*, the *Ductus Cysticus* being open; for, by this means the Choler generated in the said *Hepatick Ductus* may possibly regurgitate (there being no *Valves* in that Vessel to hinder it) and thereby become mixed with the Blood, by which means it may in a short time be conveyed over the whole Body: but whereas this passage is commonly large, so is it seldom obstructed, and therefore the Disease has very rarely its rise from that Cause: however from hence the Disease may not only possibly, but sometimes probably spring. § 31. *The other cause (which without doubt is not only more usual, but also the more rational) is the volatilizing, or (as it were) the subliming of part of the Armoniack or Animal Salt of Mans Body, which may be done, by the enrayed Spirit of venomous Beasts, or by the power of Poyson: or*

from the exceeding heating of the whole Body, either by long and immeasurably drinking of hot Liquors, or from violent Exercise, or from Feavers, whereby the universal Man comes to be inflamed, the Spirits vehemently agitated, and thereby the volatile saline Principle to be moved out of its place: this Salt by the extream heat of the parts and violent motion of the Spirit, is carried out of its *Domicil* into all the Exterior parts, and from thence would fly away: but meeting with the viscous juyce of the *Cutis*, is there stopt and being dissolved and mixt with the *Cutaneous* humidity excites that yellow colour. § 32. *And this is so much the more probable, for as much as this Armoniack or Animal Salt is distributed with the Blood through the whole Body of Man: so that in performing of so sudden and great a change, it seems not difficult, by reason of the proximity of the said Salt to the Cutis, or exterior parts: and this is so much the more easy to be believed, because that the Disease does oftentimes so suddenly seize upon a Man, who (to all appearance) is in perfect Health, as in the space of an hour or less, which we have sometimes beheld; and one special Example we remember of a Man which (being in perfect Health.) ran a race of about three quarters of an hour long, who, at the end of the Race, was all over as yellow as if he had been dipt in Saffron, not so much as the Nails of his Fingers or Toes excepted: I*

hope none can imagine that this color came from the distribution of Choller over the Superficies of the Skin: but in these cases we are apt to believe, that there was a predisposition of the Constitution of the Body to so notable a mutation or change. The same thing, may from the same reason, come to pass, from the biting of a *Viper*, or immoderate drinking of hot Liquors, or the violence of Burning Feavers, though not to all persons alike, for want of such a predisposition. § 33. Now, that we may make this opinion seem more than probable, we will shew you some of those reasons inducing us thereunto. First, the almost impossibility that the thick, clammy and glutinous substance of Choler should be dispersed from its receptacle in so short a time, to all the superficial parts of the Body, and to its greatest extremities, yea presupposing, *Sylvius* his Volatilizing thereof. § 34. Secondly, The proximity of this Volatile Animal Salt to the Cutis; the whole superficial part of the Body; as well as the internal parts, being replenished therewith: from which nearness to the Skin; not only the possibility, but also probability of the Argument seems to be confirmed. § 35. Thirdly, The nature of all Armoniack and Animal Salts is of themselves so sublime and fly away, and that without any heat, if they be dissolved and freed from a thick compacted matter: this you may prove if you dissolve Sal Armoniack, or Salt of Urine in fair water, and put it into a glazed Earthen Vessel; the more

subril part shall vanish into Air; the less subtile shall go through the substance of the Pot, (although Glased, and it be two or three Inches thick) in pure fine and white flowers, and this without any heat: which sublimation (as it were) shall never cease till the whole quantity of the Salt is wasted out of the Water: and this kind of evanishing, if it meets with any thing of heat, is so much the sooner absolved. § 36. Fourthly, Because it is the nature of most Salts upon their mixtion with vther fit Bodies to excite, or stir up new appearances of Colours, according to the nature of the Salt: So a clear and limpid Solution of white *Vitriol* mixed with a Tincture of Galls excites in a moment an opacous black: A blood-red Tincture of *Cochenele* mixt with *Saccharum Saturni* or Lime-water gives a glorious purple: *Alom* dissolved in a Decoction of *Madder* (which is of a dirty color) makes it a most glorious red: A Solution of Salt of Tartar in fair water, mixt with a Solution of *Sublimate* in fair water, gives (although both the Solutions be clear as Crystal) in a moment, a redish yellowish, or orange tawny Colour: Spirit of Nitre changes the whole substance of the Cork which stops the Bottle into a perfect yellow colour: and, with Armoniack Salts in proper Liquors, we have made many colours to appear, as yellow, black, green, tawny, purple, &c. From whence is apparent the possibility that a fit Salt (seizing upon

and being dissolved with the Curaneous juyce) should excite the Jaundice, whether yellow, black, or green, (of which last colour we have had four or five several Patients.) And be the cause of purple Spots in the spotted Fever: as also be the cause of many other sudden and great mutations and changes in the Bodys of humane kind.

XI. Of the Spleen or Milt.

§ 1. Σπλιν, Splen, Lien, the Spleen or Milt, is situated in the left side under the short Ribs, just over against the Liver, and under the Midriff, between the Ribs and the Stomach, near to the back part, where it rests upon the Vertebrae and the bastard Ribs: so that it cannot be felt with ones hand, unless it swell, and thrusts its self nearer to the Peritonæum.

§ 2. Its substance is like thick black and congealed Blood, soft, loose, and spongy, Net-like, being sprinkled all over with very many Vessels like Fibres or Threads.

§ 3. Its number is but one, if it be more, 'tis a superfluity in Nature: and its figure is somewhat long, much like to an Oxes Tongue.

§ 4. Its substance is covered with a proper Tunicle (not proceeding from the Peritonæum,) which is inserted first into the right line of the Spleen, and then covereth the whole Spleen: this Tunicle is thicker than that of the Liver, and so it ought to be, that it may endure the force of the Arterial Blood: and also because it is of a looser substance: the straight line, is in the hollow part, where the Vessels of the Spleen do enter into it. § 5. Its colour in new-

born Infants is Red, because they have been fed with elaborate Blood: but in those of Ripe Age, it is of a darkish red color, and sometimes almost blackish. § 6. As to its magnitude, it is bigger, thicker, and heavier in Man, than in Beasts: for it is about six Inches in length, three in breadth, & one in thickness. § 7. It is connected by thin Membranes arising from the Peritonæum, to the Peritonæum itself, Caul, and to the left Kidney, and sometimes also to the Septum or Diaphragma: In its hollow part, it is knit to the upper Membrane of the Caul, to the which it is distended, and to the Stomach by the Vas breve: in its arched part, it is tyed to the Back, so that sometimes the impression of the Ribs remain upon it. § 8. It has many Arteries both small and great, (nor is there any Bowel abounds with so many Arteries, except the Brain:) It has many Arteries from the Ramus Celiacus sinister, (which the Liver has not) which serve to cherish the heat and Life of the part; and that the Blood might be the more powerfully concocted and altered: as also for the nourishment of the Spleen it self: and that it might prepare acid juyce, to serve for a ferment both to the Chylus, and all the Blood. § 9. It has Veins from the Ramus Splenicus of the Vena Portæ, situated much beneath the Liver, and sent cross unto the Spleen: by these Veins, it sends its acid juyce into the Liver: from the Ramus Splenicus, proceeds innumerable small Twigs, for the most part as small

small as Fibres; of which two sometimes pass out of the Spleen. viz. the *Vas breve*, which goes to the Stomach, sometimes by one, and sometimes by more branches: some thought that by this Vessel the acid juce was sent to the Stomach, but 'tis a mistake, as may appear by cap. 12. sect. 12. § 3. following. The other branch goes to the *Anus*, and makes the internal Hemorrhoidal Veins. These Veins with the Arteries have frequent *Anastomoses*, by which the Blood is conveyed out of one into another. § 10. It hath also many small Twigs of Nerves from (the first but) our ninth pair, which are bestowed upon the Investing Membrane, but not dispersed through the substance thereof, whereby, it is but of a small and dull feeling. § 11. The action and office of the Spleen is not to be either the receptacle, or the place of the generation of Melancholy, (as several learned men have thought) nor to make Blood, (as many other famous men have imagined,) but to highly perfect the Blood already made, that it may serve as a *Fermentum*, both to the daily generated *Chylus*, and all the rest of the Blood in the Body: The excrementitious Blood which cannot be separated from the Spleen, if it be thin and watery, is purged out, first by the Arteries, not only to the Guts, but also to the Kidnies by the Emulgent Veins: hence in Diseases of the Spleen, the Urine is many times black, in which case we commonly administer Diuretics. Secondly, by the Stomach,

whence in the Scurvy and a Quartan Ague, the sick spits exceedingly. But if this excrementitious Blood be thick and earthy, it is voided directly by the *Anus* by proper Arteries going to the Guts, by which means the Ordure is black, as also by the Internal Hemorrhoidal Veins, as the great Hippocrates has often taught.

XII. Of the Reins or Kidneys.

§ 1. *Nephes, Reines, Kidneys*, so called, from *pes* to flow, because a great part of the Sanguinous Serosities flow through the Kidnies to the Ureters, and so to the Bladder. § 2. They are in number two, both for positing the Body, and for their use and necessity: that if one should be stopt, yet the cleansing of the Blood might be performed by the other. § 3. They are situate under the Liver and Spleen, by the Loyns between the two Coats of the Peritonæum, at the sides of the Cava and Aorta, under which very great Nerves lye hid, and rest upon the Muscles called *Obas*, which move the Thigh about: whence it is that a Stone being in the Kidnies, a numbness is felt in the Thigh and Legg of that side. § 4. The left Kidney is for the most part highest, and lyes under the Spleen, seldom above it: the right is lowest to give way to the Liver, reaching by its end the third Vertebra of the Loyns. § 5. They consist of a substance solid, fleshy, thick, hard, and compact almost as the Heart, but not so fibrous, proper only to themselves, so that the like is not to be found in the whole Body. § 6. Their Figure

resembles an Asarum leaf, or Kidney bean: towards the Loyns they bunch out, but towards the Guts they are hollow. § 7. Their magnitude is not always just one and the same, nor are they always both of one bigness: They are commonly of the length of four Vertebrae, or five inches, their breadth is about three Inches, and their thickness about one Inch; but the right Kidney is many times larger than the left. § 8. They are connected by an external Membrane from the Peritonæum to the Loyns and Diaphragma: by the emulgent Vessels to the Cava and Aorta: and by the Ureters to the Bladder. The right Kidney is tyed to the Cœcum, sometimes also to the Liver: The left to the Spleen and Colon; hence pains of the Reins are exasperated by plenty of Wind and Excrements. § 9. Their superficies is smooth and slippery: plain in the gibbous part, but unequal in the hollow, to let in and out some Vessels: Bartholine saith, That in a Sturgeon they are most curiously made, almost resembling bunches of Grapes of triangular and quadrangular Dies, as it were after an Artificial manner. § 10. They are covered with a double Membrane: the first and internal one is proper, which sticks close, is very thin, without Fat and Veins, and springs from the common Coat of the Vessels which enter into the Kidnies, for as soon as those Vessels approach to the Kidnies, they leave their external Coat. § 11. The second Membrane is external from the Peritonæum, within the reduplication

of which, the whole Kidney is lapped up, and therefore it is called *Renes fascia*, or the Swath band: this adheres but loosely, being only as a Cover-lid or Blanket to the Kidneys: this Membrane is compassed with great plenty of Fat, so that the Kidneys seem to be the fattest of all other Intrails: this Fat receives the *Vena adiposa*: Aristotle saith, There is more Fat about the left Kidney than the right: And this Fat has a threefold use. 1. To serve as a Pillow. 2. To receive a part of their Excrements. 3. To preserve the heat of the Kidneys, and to defend the Vessels, least that the plenty of Serum might over-cool them, or otherwise do hurt. § 12. In Fat persons, then the Kidnies lye as it were quite hidden with Fat, from whence it is, That he that knows or searches into hidden things is said to search the Reins. *Scriptura enim duabus vocibus utitur כליות & מהות Kelajoth and Mahoth illud à perficiendo dictum vult Mercerus & consummando, quod in renibus vñ consultandi insit & consilij perficiendi: Hoc à טיה Tiah, litura obductione derivant, & radici טיר Tivat, linire, incrustare, quandoquidem renes adipe incrustantur & occultantur. Scrutari renes quidem de Concupiscentijs & Venerea delectatione explicatur à quibusdam à כלי Kalat, desiderare, teste R. Davide & Pagnino, vel à כלי Keli, Vase, eo quod in renibus & ex his sit illarum rerum libido. The Scripture (saith Bartholine) uses two Words Kelajoth and Mahoth, the*

the former of which *Mercerius* will have to be derived from a word signifying to perfect and finish, because there is in the Reins, a power of Consulting, and finishing of things consulted on. The latter they derive from *Tiab*, a Blot, and from the Radical Word *Tivat*, to dawb, plaster, or crust-over, because the Kidneys are crusted over, and hidden as it were with Fat. Some indeed explain the [searching of the Reins] to be meant of Carnal Concupiscence, and Venereal delectation, from the Words *Kalat*, to desire, as *Rabbi David* and *Pagnine* testify: Or from *Keli*, a Vessel, because in the Reins is the desire of Venereal Pleasures. § 13. *The colour of the flesh of the Kidnies is Red; and through their hollowed sides are carried the Emulgent Veins and Arteries, proceeding from the Trunks of the Cava and Aorta, first, they enter bipartite or divided into two, then each branch is divided into four or five lesser branches, and these again into lesser, till at last they are consumed or become Capillar, viz. divided into very fine and small Threads.* § 14. *These being spread sundry ways, through the substance of the Kidney, towards the gibbous part, at the last they end at the Tops of the Caruncula Papillares, or Teat-like fleshy substances, into which they cast the Serossities of the Blood, that they may pass through the Tubuli or Water-Pipes, to the Infundibulum.* § 15. *This Infundibulum called also Pelvis, the Basin, is nothing else but the ample Cavity of the Uterer, within the Kidneys, which*

being membranous, is spread out, and widened within the said Cavity. § 16. *The Tubuli, or Fistulae Uretrum; the Water-Pipes of the Ureters, are most commonly in number ten: four in each end, two being still joyned together, and two in the middle, according to the number of the Caruncula Papillares. These are seated in the Arched part of the Infundibulum. Now the ends of the Pipes about the Infundibulum are called Cribrum, or the Seve: these Tubuli proceeding from the Infundibulum become a little wider, and end in the bunching part of the Kidney, and with broad or open-like Pipes (as it were wide-mouths) embrace or receive certain Caruncles or little fleshy eminences called Caruncula Papillares, by which their Mouths are stopped, and the Serosity of the Blood issues out into them, as Milk out of the Teats.* § 17. *These Carunculae Papillares are like Kornels, less colored and harder than the rest of the flesh, resembling the Teats of Womens Dugs, from whence they have their Appellation, being about the bigness of Pease, somewhat broad above, round below, with very little holes bored through them; for if you divide them in the middle, you may perceive a smooth Hair-like passage from the top to the end. These holes ought to be exceeding small, so as scarcely to permit a Hair to go through, least the Blood (which is to nourish the Kidnies) should with the Serum, flow into the Ureters: which often happens when the Reins*

Reins are diseased, or the passages too open. § 18. To find out these parts and view them: You must artificially cut the Kidney on the hollow side to the Infundibulum, putting a thick probe into the Pelvis, so shall be presented to your view, the Tubuli, or enwidned substance of the Ureter, which forms the Pelvis or Basin, into which from the upper part, the serous humor drains down drop after drop, through the Caruncula Papillares, which are accumulated without, and are included and thrust into the Tubuli aforesaid, made of the substance of the Ureter dilated. Therefore (saith Riolanus) that covering through which the Serum drops may be called *Cribrum Renum*, the Kidney sieve, and in these Caruncles the Urine is separated from the Blood, which Blood after nourishing the part, flows back again into the emulgent Veins. § 19. The Kidneys have Veins from the Cava: first the two emulgents, or milking Veins, so called from their office, which are great because of the large quantity of Serum in the Body. They spring from the Cava descending, between the first and second Vertebrae of the Loyns, whence they are carried transversely and implanted into the hollow part of the Kidneys. § 20. Secondly, The Vena Adiposa, the right being drawn from the Emulgent, the left from the Cava, to the outward Coat, which contain Blood to nourish the Fat. § 21. They have also Emulgent Arteries, which are large and derived from the Trunk of the

Aorta, which carry Blood for nourishment, and that therefrom the Serum (which is plentiful in the Arterial Blood) may be separated. These are two in number one in each side, which accompany the Veins to the Kidney flanking, where they are divided into two branches, of which the one branch is implanted in the lower, the other in the upper part of the hollow of the Kidney but sometimes these branches are three, four, five, or six in number: these branches when they have entered the Kidnies, are suddenly subdivided into four or five other little ones: and they again into other lesser, which are at last spent into twigs as small as Hairs, and end at the Heads of the Caruncles, into which they issue the Serous humour, that it may distil into the little Pipes of the Ureters, as aforesaid. § 22. They have also one very small Nerve on each side, which springs from the Ramus Stomachicus, proceeding from the Par Vagus, and is inserted into the proper Membrane of the Kidney, whence arises the Sympathy between the Stomach and Reins; and that they when diseased in the Kidnies by the Stone or some other distemper, are for the most part sick of Stomach, and troubled with Vomiting. § 23. The use of the Kidneys is to attract the Sanguinolent Serosity by the Emulgent Arteries that so the mass of Blood may be cleansed: which Blood going through these Vessels, is always carried through the branches of the Emulgents, disseminated as broad through the whole Parenchyma.

chyma of the Kidnies, and runs at length into very small passages, so that at last the wheyish humor is thrust quite out into the flesh of the Kidneys, the good Blood remaining partly to nourish them, and partly to return by the little Emulgent Veins, which are open into the Cava, and so to the Heart. The serous part is strained through the Papillary Caruncles, which have holes into the branches of the Ureters; and after grow together into one large Cavity or Expansion of the Ureter, into which the Serum is emptied, through the Ureters it passes into the Bladder, where it becomes Urine.

XIII. Of the Deputy Kidneys, or black Choler Cases.

§ 1. Renes Succenturiati, or Capsulæ atribiliaria, the black Choler Cases, were first found out by Bartholomew Eustachius, and are so seated that they rest upon the upper part of the Kidnies on the out-side, where they look towards the Vena Cava, being covered with Fat and Membranes. § 2. Their number is one on each side, for upon each Kidney is situated a Case: that on the right side is bigger than that on the left, and in a new-born Child they are near as big as the Kidneys themselves; but in grown persons they become less, though they abound more with Melancholy, being commonly no bigger than a large Vomiting Nut; yet in persons where abundance of Melancholly abounds, Bartholine saith, He has found them twice as big as ordinary. § 3. In figure and substance, they for the most part

resemble the Kidnies, save, that their flesh is a little looser: so that they seem like little Kidneys, resting upon the great ones, whence Casserius might call them Renes Succenturiati, Auxillary Kidneys: Sometimes their substance is flat like a Cake, sometimes Oval, sometimes Triangular, sometimes Square, and sometimes like a half Moon. § 4. They have an apparent internal Cavity, furnished with a dreggy and black humour, so that the inside is coloured with the said blackness: this Cavity is large, in respect to the smallness of the Body. § 5. They are strongly connected where they rest to the external Membrane of the Reins, and to the Septum transversum, to which they commonly stick in Dissection. § 6. They have Veins and Arteries from the middle of the Emulgents: Sometimes they have a Vein from the Kidney, and sometimes a branch near the Liver, from the Cava: sometimes from the Vena adiposa, and sometimes from them all, and that either with a single or with a double branch: Sometimes they have a single Artery from the Emulgents, at other times a double one: Sometimes they have a single branch from the trunk of the Aorta, othertimes three together. § 7. They have Nerves from the Plexus retiformis, or Net-like texture, (about the beginning of the Arteries of the Mesentery) which are framed of the twigs of the Nervus Costalis, and the Stomachicus. § 8. The humour contained in these Capsulæ, Bartholinus thinks is brought from

from the Spleen : and he says, the Arteries do easily occur, to such as hold the Circulation of the Blood. According to the old Opinion, a way is readily found to these *Capsula*, from the Emulgent, or from the Trunk, of the *Aorta* it self. The humor strained there into, by the ferment of the part is changed (as is supposed) into black Choller or Melancholy. § 9. It is thought to be carried out of the Cases, and to enter the Kidneys directly by the Emulgent Veins, where though the motion of the Blood going out of the Kidnies is contrary ; yet the contrary motion of a thicker and stronger humor may easily over-come : Others think, it comes out of the *Capsula*, by the little Arteries, and goes again with the emulgent Arteries to the Kidnies, and from thence is purged by Urine. The Truth is, the way is not yet discovered but by conjecture. § 10. We rather think, That passing with the Emulgent Veins, it takes a Circular Course with the Blood, and adds to it a Saline Spirit, by which the colour of the Blood is fixed : and its Substance kept intire. *Qui optime conjecerit* (saith Bartholinus) *optimus vates esto*. We hope we are not far from the Truth ; yet we give every one the free liberty of embracing his own opinion.

XIV. Of the Ureters.

§ 1. *Ουρητιδες, Ureteres, Meatus Urinarij*, The passages of the Urine : the Greek word is derived either from *ουρην*, to Piss, or from *ουρην* *ερεον* *τερεσθαι*, because they keep the Urine together to convey it into the Bladder. § 2.

They are in number two, one in each side : But Bartholine saith, They have been found two and sometimes more on each side, yet all growing into one before their insertion ; as also Carolus Stephanus observed in a certain Body. § 3. They are white Vessels like to Veins, but thicker, whiter, and more nervous : consisting of a single membranous substance, inclosed in a duplication of the Peritonæum, according to Riolanus : but indeed they have a double Membrane, one common from the Peritonæum for strength sake : the other proper, like the inner substance of the Bladder and continued therewith. § 4. They are as long as between the Kidneys and Bladder : and commonly as thick or wide as Goose-quills : But in dissection of persons troubled with the Stone, they have been found so wide as to admit a mans Finger yea 2 Fingers : some have found them as thick as Guts. § 5. Their original is in the Kidneys, within whose Cavities they are divided into nine or ten little Pipes or Channels, which are fitted to the little fleshy Teats or Carunculæ Papillares, that they may distil the Secret into the Basin, or large Cavities of the Ureters within the Kidnies. Now these Pipes pass into fewer and greater branches, commonly into three, distributed into the upper, middle, and lower Regions of the Kidneys : these afterwards grow into one large Cavity, which passes out of the flat side of the Kidney : the middle part is the whole long round Pipe or Channel, resting upon the Muscles of the Loyns, between two

two Membranes of the *Peritonæum*, with which the *Ureters* are fastned: above the *Kidneys*, below to the *Bladder*, with the inner substance whereof, they make one continued Body, so that they cannot be pluckt away without breaking. § 6. The *Ureters* then descending within the duplicature of the *Peritonæum*, upon the *Muscles* of the *Loyns*, to the *Bladder*, are inserted obliquely into its Neck: then ascending upwards between its Membranes, they perforate the innermost Coat together, and through the same hole they both enter the *Bladder*: in the implantation of the *Ureters*, too little Membranes or Valves are placed, like the Valves in Bellows, shutting up the passages of the *Ureters*, so that the *Urine* cannot go back: But *Laurentius*, *Riolanus*, *Plempius* and *Barbetteus*, deny these Valves, contrary to all other Anatomists: but the Truth is easily proved: for though the passage is open enough, yet the *Bladder* being blown up strongly, it admits of no more Wind, nor emits that which is in it, otherwise than by the way it went in. § 7. They receive small Veins and Arteries from the neighbouring parts: and Nerves from the *Par Vagum*, and Marrow of the *Loyns*. § 8. Their use is as Conduit Pipes to convey the *Urine* Gravel, Stones, Hair, Worms, &c. from the *Kidneys* into the *Bladder*.

XV. Of the *Bladder* or Reception of *Urine*.

§ 1. *Vesica Urinaria*, the *Bladder* is seated between the duplica-

ture of the *Peritonæum*, in the Cavity of the *Hypogastrium*, which is called *Pelvis* or the *Basin*, in a Man also it lyes between the *Os Pubis* and *Intestinum rectum*: in a Woman between the *Os Pubis* and the Neck of the Womb. § 2. Its figure is Oval or Globical, that it might hold the more: From the bottom it is by little and little straightned into a narrow Neck. § 3. Its magnitude is various; and according to the greatness of the Lungs, such is the greatness of the *Bladder*: and such Animals as have no Lungs, have no *Bladder*: Man according to his magnitude has of all Living Creatures the greatest *Bladder*. § 4. Its substance is partly membranous, for strength sake, as also that it might extend and wrinkle together: and partly fleshy for motion sake. § 5. It has two Membranes and one Muscle, which most Anatomists make to be a third Membrane and not a Muscle. The first Membrane is outmost and common from the *Peritonæum*, which is strong and thick. The second or middlemost, is proper, furnished with fleshy Fibres: This *Aquapendens* and *Bartholine*, will rather have to be a Muscle encompassing the whole *Bladder*, serving for the voidance of the *Urine*, by contracting it self to squeeze it forth: The Third, or innermost Membrane is also proper, thin, white, and bright, of exquisite Sence, and Interwoven with all kinds of Fibres, for distension and contraction sake. § 6. This third Membrane is covered with a mucous or fleshy Crust, or wrinkled Coat, as it were, made of the Excrements of the

third digestion, least the innermost Tunicle should be fretted with the sharpness of the Urine. § 7. *The bottom is fastned to the Peritonæum, and to the Navel by a middle Ligament called Urachus, and the two Navel Arteries dried up:* and this suspension is, That Man going upright, the bottom of the Bladder should not compress the Neck and so cause difficulty in pissing: Hence also it is, That they who have a great Stone in the Bladder, complain of a great pain about the Navel. § 8. *The Neck of the Bladder is tyed in Men to the Intestinum rectum: but in Women to the Vagina Uteri, or Neck of the Womb, and to the Neighbouring Hip-Bones.* § 9. *The Bladder has three holes: two a little before the Neck, where the Ureters are inserted: and a third in the Neck, through which the Urine is voided.* § 10. *The neck is fleshy and fibrous, furnished with a Sphincter Muscle to purse it up, that the Urine may not pass out against our Wills:* In Men this Neck is long, narrow and wrethed because being placed under the Bodies which constitute the Yard, it runs upwards under the Share-Bones, from the Fundament to the original of the Yard. In Women it is short and broad, stretched forth right downwards, and implanted above into the Neck of their Womb. § 11. *The Bladder has Arteries from the Hypogastrica in Men: and from those which go to the Neck of the Womb in Women; by these it is nourished: it has Veins also from the Vena Hypogastrica implanted into the*

sides of its Neck, variously disseminated through the Bladder, which are mutually conjoynd one with another and with the Arteries by open holes, that the nutritive Blood may return: And it has Nerves from the Par Vagum, and from the Medulla of the Os Sacrum. § 12. *The use of the Bladder is to contain the Urine till the time of Excretion, that the Man may not always be Pissing.*

XVI. *Of the spermatick Vessels in Men.*

§ 1. *Vasa preparantia, seu Vasa spermatica, the Vessels preparing the Seed, are two-fold, viz. the two Spermatick Veins, and the two Spermatick Arteries.* § 2. *The right side Vein springs from the Trunk of the Vena Cava, a little below the rise of the Emulgent: the left springs from the Emulgent, otherwile it must go over the Aorta, and then there would be danger of breaking: or at least by reason of the Pulsation of the Artery, the Venal Blood might be hindered.* § 3. *Both the seminal Arteries arise from the Trunk of the Aorta, about two inches distant from the Emulgents: these Vessels being a little distant one from another are tyed together by a thin Membrane from the Peritonæum.* § 4. *These spermatick preparers are greater in Men than in Women, and the Arteries are greater than the Veins, because very much heat, Vital Spirit and Arterial Blood are requisite to make Seed: These Vessels are carried obliquely above the Ureters, to the Groins; but in their progress they are joyned by Infinite Anastomoses*

or

of *Inosculation*: so that the Arteries are so coupled within the Coats of the Veins, as if they were but one Vessel, and they are knit together by a Membrane arising from the *Peritonæum*, and afterwards carried to the beginning of the Testicles, like Tendrils of a Vine, being so interwoven, that a curious Eye cannot distinguish a Vein from an Artery. § 5. This intertexture of Veins and Arteries, being the twistings of the *Vasa preparantia*, makes a long, thick, glandulous, but hard Cord, called *Corpus Vari-cosum*, *Pampiniforme*, and *Pyramidale*, which is without any remarkable Cavity. § 6. These Vessels do not pass through the *Peritonæum* as in Dogs, but are carried between its double Coat, with a small Nerve from the *Par Vagus* and the *Muscle Cremaster*, and passing to the bottom of the Testicle, ends at the *Vas Defferens*. § 7. But this is to be observed that these preparatory spermatick Vessels, when they come to the Testicle, are not changed into the *Vasa Defferentia*, or carrying Vessels: as if they were one continued Body with them, as some have thought, but they pierce through the proper Membrane of the Testicle, and spreading themselves through the substance thereof are obliterated. § 8. These Arteries carry Blood and Spirits (in whose admirable Windings they are more elaborated) to the Testicles, from whom they have a Vertue Seminal: with this Blood the Stones are nourished, and part of it (in those of ripe Age) becomes Seed: the Veins (which are less

than the Arteries) are closely interwoven with the Arteries about the Testicles, and joyned to them by mutual *Anastomose*; that they may carry back the Blood which remains (after the Stones are nourished, & the Seed made) unto the left Emulgent, or to the *Vena Cava* on the right side, from whence the Spermatick Vein commonly springs. § 9. If one or both the Spermatick Arteries be wanting, as they are sometimes: Such persons doubtless cannot get Children, but must necessarily be Barren.

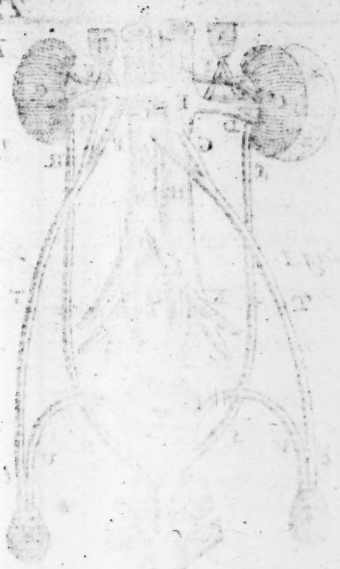
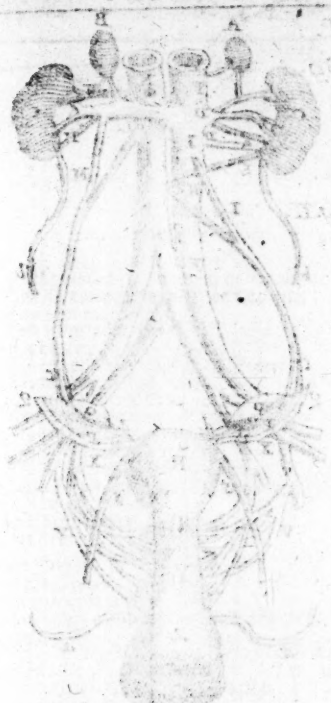
XVII. Of the Testicles in Men:

§ 1. *Διδυμοί*, *Gemelli*, *Testes*, *Testiculi*, The Testicles, or Stones (so called as some think, because they testify one to be a Man) are in number two. § 2. They are glandulous Bodies, flaggy, spongy, soft, and white, without any Cavity, full of small Veins and Arteries, such as are not in any other part of the Body. § 3. Their figure is Oval, but it sometimes varies, according to the Turgency of any of the neighbouring Vessels. § 4. The right Testicle is hotter and better concocts the Seed, than the left: because the former receives its Arterial Blood immediately from the *Aorta*, the latter from the Emulgent. § 5. They are seated externally without the Abdomen, under the Belly, at the root of the Yard, in the Cod or Covering: being commonly in Men answerable to the bigness of a small Hens Egg. § 6. The Membranes being taken away, the substance of the Testicle comes in sight, upon which, overthwart, is placed a small Body, much like (saith

(saith Riolanus,) To a Silk-worm, and it is called *Epididymus*, or *corpus vermiforme*, to the one end whereof cleaves the *Vas spermaticum deferens*, the carrying spermatick Vessel, which enters into the substance of the Testicle, and empties the Seminal matter thereinto: from the other end of the *Epididymis* arises (saith he) the *Vas ejaculatorium*, which in its beginning is full of Turnings and Windings, as is the Body of the *Epididymis*, and cleaves firmly to the Testicle, by its ends, being loose, and separate in its middle. § 7. They have Vessels of all sorts, Veins and Arteries from the Seminal Vessels: and an indifferent large Nerve from the *Par Vagum*: Sometimes also they have two Nerves from the twenty first pair of the Spinal Marrow, which being conjoynd with the Spermatick Vessels, is carried with them through the production of the *Peritoneum*, and disseminated into the Tunicles. § 8. They have on each side one proper Muscle called *Cremaster* or *Suspensor*: and a common Muscle from the Membrane of the Cod called *Dartos*. § 9. The Testicles have also several Tunicles, Coats, or Coverings: of which two are common: three proper to themselves only. § 10. The first common coat (which is for to defend the part) is constituted of the Skin and Scarf-skin, and is called *Scrotum*, or *Bursa scroti*, because it is like a Purse or Bag: it is soft, wrinkled, and void of Fat: having in its lower part a Line, according to the length thereof, which divides into a right and

left part, and is called *Sutura*, or a Seame. § 11. The second common Coat consists of a fleshy Membrane, springing from the *Membrana Carnosa*, which is here thinner than in other places, and full of Veins and Arteries, and is called *Δαρτός*, *Dartos*: this by many is comprehended under the term *Scrotum*. § 12. The first proper Coat is called *ἐρυθροειδής*, *Elytroides*, *Vaginalis*, the Scabberd Coat; and *ελικοειδής*, *Elicoides*, from its thinness, which is yet strong and full of Veins, arising from the processes of the *Peritoneum*, and cleaving to the *Dartos* by many membranous Fibres, whence its exterior part is rough its interior smooth. § 13. The second proper Coat is called *ερυθροειδής*, *Erythroides*, because of its redness: It has some fleshy Fibres from the *Cremaster*, from which it is propagated, and is spread over the *Vaginalis*. § 14. The third and innermost called *Albuginea*, or *Nervea*, arising from the Coat of the spermatick Vessels, immediatly encompasses the substance of the Stone, and as it were binds the same, being white, thick, and strong. § 15. The use of the Stones is to elaborate the Seed, and to make it (saith Bartholinus) by their heat and inbred faculty: for the efficient cause of the Seed is the proper *Parenchyma* of the Testicles, both in regard of their hot and moist temper, and of their specifick property; for the Blood being prepared, they convert it into Seed; what remains over and above serves for nourishment of the Part, and the remainder is con-

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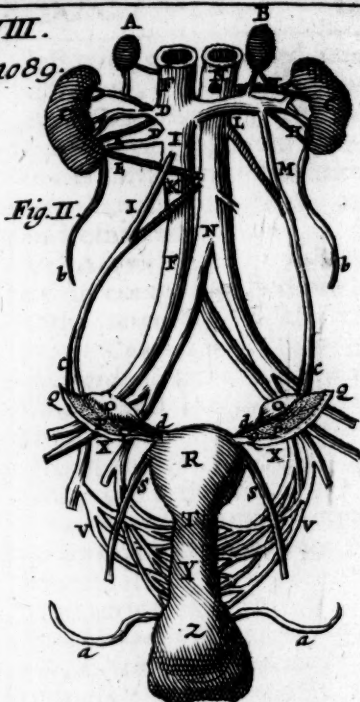
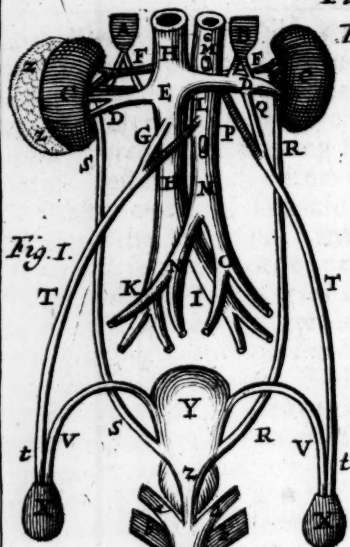
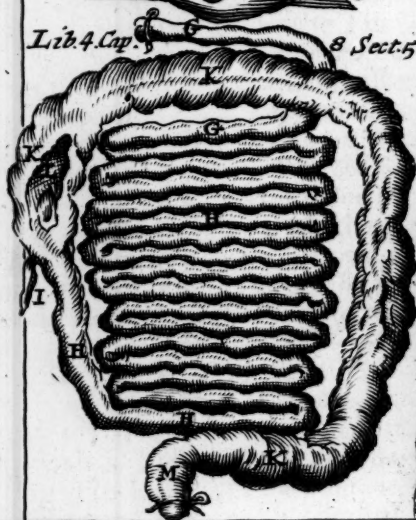


Fig. IV. Pag. 1141.

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Tab. VIII.

Fig. I.

- A. Right Glandula Renalis, or Capsula.
 B. Left Glandula Renalis, or Capsula.
 CC. Reins on each side.
 D. Left Emulgent Vein.
 E. Right Emulgent Vein.
 FF. Right and left Emulgent Arteries.
 G. Right Spermatick Vein.
 HH. Trunk of Vena Cava descending.
 I. Left Iliack branch of Vena Cava.
 K. Right Iliack branch.
 L. Right Spermatick Artery.
 MM. Trunk of Aorta descending.
 N. Right Iliack branch of the Aorta.
 O. Left Iliack branch.
 P. Left Spermatick Artery.
 Q. Left Spermatick Vein.
 RR. Left Ureter.
 SS. Right Ureter.
 TT. Vasa preperantia.
 U. The same Vessels where the Pampiniformia begin.
 UU. Vasa deferentia running behind the Bladder.
 XX. Scrotum with the Testicles in it.
 Y. The Bladder.
 Z. Neck of the Bladder.
 aa. Two Muscles erecting the Yard.
 bb. Two Muscles dilating the Urethra.
 c. The body of the Yard.
 d. The Preputium.
 zz. The Common Membranes of the Reins bespread with Fat.

Fig. II.

- AB. Capsulae tribilariæ.
 CC. The Kidneys.
 DD. Right Emulgent Veins.
 EE. Right Emulgent Arteries.
 FF. Vena Cava divided into the Iliack branches.
 G. Left Emulgent Vein.
 H. Left Emulgent Arteries.
 I. Right spermatick Vein.
 K. Right spermatick Artery.
 L. Left spermatick Artery.
 M. Left spermatick Vein.
 NN. Aorta divided into its Iliack branches.
 OO. Womens Testicles.

- PP. A part of the broad Ligament, or Bats Wings.
 QQ. The Trumpets of the Womb on both sides.
 R. Bottom of the Womb.
 SS. Round Ligaments of the Womb cut off at the Share.
 T. Neck of the Womb.
 VV. Vena Hypogastrica on both sides.
 XX. Arteria Hypogastrica.
 Y. The passage of the Womb.
 Z. The Bladder depressed above the Pity.
 aa. A portion of the Ureters cut off.
 bb. A Portion of the Ureters descending cut off.
 cc. Vasa preperantia dilated.
 dd. Vasa deferentia.

Fig. III.

- A. Superior Orifice of the Stomach tyed.
 B. Inferior Orifice, Or. Pylorus tyed.
 CC. Common Tunicle of the Stomach separated.
 D. Middle Tunicle of the Stomach.
 E. Inner Tunicle of the Stomach.
 F. A portion of the Duodenum.
 GG. The Gut Jejunum.
 HHH. The Mesos as it lies in its folding.
 I. The Gut Cecum.
 KKK. The Gut Colon.
 L. The Valve opened in the beginning of the Colon.
 M. The Intestinum Rectum tyed with a Thread.

Fig. IV.

The Cutting of a Wry Neck.

- AA. The Clavicle.
 BB. Musculus Latissimus dorsi.
 CCC. The Intestines of the 3rd Male.
 The Incision Knife put under the Muscle of its Tendon.
 DD. The Iliack Vein lying under the Intestine.

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conveyed back, by the Spermatick Veins to the Heart. § 16. *It any shall deny this use of the Stones, or say, That Seed was never found in them, we desire such to answer these Queries.* 1. Why such as are guedied are uncapable of Generating? 2. In what other parts can the Seed be made? 3. How (if it passeth not through them) can the Seed be conveyed to the *Vasa deferentia*?

XVIII. Of the *Vasa Deferentia*, or Carrying Vessels in Men.

§ 1. The *Vasa Deferentia*, are the Vessels carrying away the Seed; and these begin at the Testicles, and end at the root of the Yard, whether they carry and ejaculate the Seminal humor, being in number two; on each side one.

§ 2. Now these *Vasa Deferentia*, called also *Meatus Seminales*, are divided into three parts; the beginning, middle and end: under which are comprehended, the *Parastata*, the *Vasa Ejaculatoria*, the *Vesicula Seminales*, and the *Prostata*. § 3. *Parastata*s, or

The *Parastata*, or Affiliants, or *Corpora Varicosa*, or *Variciformia*, (from them resembling *Varices*) called also by Galen, *Epididymides*, because they rest upon the Testicles, are the beginnings of the *Vasa Deferentia*. § 4. Their

substance is of a middle Nature, between that of the Testicles & that of the *Vasa ejaculatoria*, being within, glandulous and spongy; but without, membranous. § 5. They have their original in the Stones, making many *Anastomoses* there, with the *Vasa preparantia*, by means of innumerable small Pipes, or

white Fibres. § 6. The use of the *Parastata* is to perfect and finish the Seed, by a Virtue which they receive from the Testicles, and while the Seed is lodged in them, frequent lust is not provoked. § 7. The *Vasa ejaculatoria*, are the middle of the *Vasa deferentia*, properly so called; these convey the Seed from the *Parastata* or *Corpora varicosa* to the *Vesicula Seminales*. § 8. Their substance is white and nervous; their figure long and round, with an obscure cavity or hollownes.

§ 9. Their situation is partly in the Testicles, partly in the Cavity of the Abdomen, above the Os pubis or Share-bone; for they run upwards and are knit to the *Vasa preparantia* by a thin Membrane, and so are carried along to the Flanks and Share-bone, which for that purpose have a slight Cavity. § 10. After being turned back downwards, they pass above the Ureters, and under the hinder part of the Bladder, above the *Intestinum Rectum*, at the Neck of the Bladder, they are on each side widned, and there constitute the Seminal Bladders. § 11. *Vesicula Seminales*. The Seminal Bladders, are the end or Termination of the *Vasa Deferentia*; after the constitution of these Bladders, these carrying Vessels are united into one small passage, and are inserted into the *Prostata*. § 12. These Bladders are many in number like little Cells, and seem to make on each side one remarkable great and winding one, for that they go one into another, much resembling a bunch of Grapes. These Cavities, faith

Bartholine, neatly represent the Cells of a Pomgranate, or Honey Comb, both in Order and Figure: They were first of all described by *Rondeletius*, and after him by *Fallopins*. § 13. *Their substance is nervous, and they are seated between the Ligaments of the Bladder, and the Rectum, by the sides of the Vasa ejaculatoria, a little before the said Vessels grow thick and unite.* § 14. *Their use is to contain the Seed being perfected, and to reserve the same till the time of Coition, that so there may be a sufficiency for Generation.* § 15. *Neg-sars, The Prostatæ, standers before, stoppers, or Conducters, are two certain Caruncles (in which the Vasa deferentia terminate) manifestly differing from the Vesiculæ Seminales in use, form, situation, and magnitude.* § 16. *Their situation is at the root of the Yard, above the Sphincter of the Bladder, on each side at the Neck thereof.* § 17. *Their substance is spngy, yet harder and whiter than any other Kernels, and they are also covered with a thicker Membrane, being of exquisite Sence, that they might cause Pleasure in Coition.* § 18. *As to their figure, they are flat before and behind, but round on the sides: their magnitude is usually as big as a Wall-nut: and they are open by certain Pores into the Urethra or Urinal passage, which is evidently apparent in such as have dyed of a Gonorrhœa, where they have been dilated, and in whom the Seat of that Disease did lodge.* § 19. *Their use is to contain a viscus*

and slippery humour, to moisten the Urethra, for the more easy and speedy passage of the Seed: And they also serve to stay the involuntary effusion of the Seed, and to hinder its regurgitation, being once emitted. § 20. *They terminate in a small Caruncle upon the Urethra, which as a Valve serves to the latter use aforesaid, and to hinder the coming of Urine into them: Under and by this Caruncle on each side, there are inconspicuous holes, or Pores, through which the Seed passes into the Urethra, just as Quick-silver passes through Leather, the which it does by Virtue of its being repleat with a vast quantity of subtil and penetrating Spirits.* § 21. *In these Pores of the Prostatæ, and in the Seminal Bladders, the Seat of a virulent Gonorrhœa has been observed by late Anatomists: and therefore if they be broken, hurt, or dilated, either by a Catheter putting into the Bladder, or by any other means, there follows immediately an incurable Gonorrhœa.* § 22. *Some think, that the Prostatæ, both make and contain Seed; but the contrary you may easily prove, for if you press them with your Fingers nothing comes away, but if you press the Vesiculæ Seminales, the Seed is presently forced into the Urethra, just as Milk out of the Dug.* § 23. *The distance between the root of the Cod and the Podex is called Perinæum, because it is still moist with Sweat: This, with the Pubes and Scrotum are furnished with Hair, because Glandules are placed here, which abound with plenty of hu-*

midity a part of which they send to the Skin for the generating thereof.

XIX. Of the Penis or Yard.

§ 1. *Penis* (à pendendo from hanging down,) *The Yard*, is an *organical part*, long, and roundish, but broader on the upper side than where the *Urethra* is, being an Instrument of Generation, and appointed for the evacuation of the Seed and Urine. § 2. *It is seated under the Os pubis, exactly in the middle*, because it is only one in number. § 3. *Its magnitude is various, being for the most part greater than ordinary*, 1. in little Men 2. In such as have large Noses, for the proportion of the Yard very much answers that of the Nose. 3. In *Æthiopians* or *Blackmores*. § 4. *It consists of a Scarf-skin (but that Riolanus and Barbet deny) Skin, fleshy Membrane, and a proper substance of its own*: but is void of Fat even in the fattest men, least thereby its most exquisite Sense should be dulled. § 5. *Its proper substance is four-fold, first the Urethra: secondly, the Glans: thirdly and fourthly, the two nervous Bodies, one on each side.* § 6 *The Urethra or passage of the Urine and Seed, is a Pipe of a nervous substance, of the same bigness from the Neck of the Bladder (to which it is joyned) to the end of the Yard, or beginning of the Glans, for in the middle of the Glans, it has a greater hollow-ness. Its substance also is thick, loose and soft, like to that of the two latter Ligaments or nervous Bodies.* § 7. *This Urethra*

has also two Membranes, and a substance proper to it self. § 8. *The one Membrane is internal, thin, and of exquisite Sense, with which also the Glans is covered: this Springs from the thin Membrane which cloths the Nerves of the Yard.* § 9. *The other is external, more thick and fleshy, and furnished with transverse Nerves.* § 10. *The middle part which is its proper substance, is loose, spongy and black, that it may be distended or contracted with the other parts.* § 11. *In the beginning of its Channel, are these Pores through which the Seed is ejaculated, as also a little Membrane or Caruncle like a Valve stretched before it to keep the Seed and Urine from returning into the Spermatick Vessels: if it be broken or eroded by sharp humours, or the unskilful use of a Catheter, there follows an incurable Gonorrhœa.* § 12. *Its use is to be the Common passage of the Urine and Seed.* § 13. *Balanus, Glans, the Head, or Nut of the Yard, is an hollowed Kernel, wider in the middle, than the mouth of its external Orifice: of a globular form, even, and compassed with a circle or crown.* § 14. *Its substance is flesh more solid than the rest of the Yard, of a most exquisite Sence, and covered with an exceeding thin Membrane, soft and red.* § 15. *It is covered with the reduplication of the external Skin of the Yard, called preputium (à putando, from cutting off,) The Fore-Skin: this is that, which the Jews cut off in Circumcising.* § 16. *This Skin is tyed at the root of the Glans, by a*
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certain Ligament called *Frenum* the Bridle, arising from a Combination of the Tendons of the Muscles of the Yard and a Nerve, and terminating in the extreame hollowness of the Nut. § 17. The two nervous bodies or hollow Ligaments, one on each side, do constitute the remaining and greatest part of the Yard: the whole substance whereof being much like a moist thick spongy Artery, stuffed with flesh. § 18. Their external substance is long, thick, compact, hard and nervous: their internal substance is spongy, thin, hollow, of a net-like Texture, framed of innumerable twigs of Veins and Arteries, of a dark red color inclining to black, and filled as *Vesalis* saith, with a great abundance of black Blood, very full of Spirits, which waxing hot, causes a distention and erection of the Yard. § 19. These two Bodies (where they are thick and round spring from the lower parts of the *Shære-bone*, or *Hip-Bones*, to which they are strongly tyed with two Ligaments. In their beginnings they keep some distance, being separate one from another almost like the Roman Y, that the *Urethra* may pass between them. § 20. But when they cease to remain perfectly separate, viz. when they come to the joining at the *Shære-Bone*, they lose near a third part of their nervous substance: yet they still remain distinct by the coming between of a single membranous partition, called *Septum Lucidum*. § 21. This Membrane is white, thin, transparent and full of nervous Fibres: it arises from the upper part of the Commissure of the *Os pubis*, and upholds the said

two lateral Ligaments: and the *Urethra*, as a stay, the like of which is also found in women to uphold the *Cunus*. § 22. The Yard has all sorts of Vessels, as *Keimr*, 1. External, running up and down in the Skin, from the *Pudenda*. 2. Internal ones, from the *Vene Hypogastrica*, which are spread through its whole Body. § 23. It has Arteries, two internal remarkable ones, arising from the *Hypogastrica* which are inserted into the beginning of the growing together of the two nervous Bodies, which are scattered up and down according to the length of the Part: but in the middle where the *Septum Lucidum* is thinnest, they send branches through the spaces of the *Fibræ*, the right Artery, into the left nervous Body, and the left into the right, carrying Spirits and Blood to blow up, erect, and nourish the Yard. § 24. It has two Nerves from the Marrow of the *Os Sacrum*, which disseminate themselves through all parts of the Yard, both internal and external: ascending through the middle of the forked division, they spread themselves into the Muscles, the whole Body of the Yard, and the *Glans*, that there might be an exquisite sense and delectation. § 25. It has also four Muscles, two Erectors: and two Accelerators or ejaculators, under which Muscles lye hid the two nervous Bodies.

XX. Of the spermatick Vessels in Women.

§ 1. These preparing Vessels are the same with those in Men, and agree in their number, nature, original, and office, yet they differ

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from those in Men, in the following things. § 2. *First they differ in their Longitude*: in women they are shorter, by reason o'th shortness of the passage, but they have more wrathings, windings and turnings, where they make the *Corpus varicosum* about the Testicle that the Seed may have a sufficient stay, for its due preparation. § 3. *Secondly, in their insertion*: in Women they pass not whole to the Testicles as in a Man, but are divided in the Mid-way: whence the greater part goes to the Testicles to form the *Corpus Varicosum*: the lesser part to the Womb, into whose sides it is disseminated, especially to the upper part of the bottom, to nourish the Womb, and the Child therein; and that by those Vessels some part of the menstrual Blood may be purged forth in such as are not with Child. § 4. *This lesser part is Tripartite, being divided below the Testicle into three branches, of which one runs out into the Womb, as aforesaid*: the second is distributed to the *Vas deferens*, or Trumpet of the Womb, and to the round Ligament: The third, creeps along the sides of the Womb, insinuating itself among the *Vena Hypogastrica*, with which and the Arteries, they are joyned by *Anastomoses*. § 5. *Thirdly, The spermatick Veins receive the Hypogastrick Arteries, as they pass by the sides of the Uterus, that the Blood might be the better elaborated*: yea they are intermixed wth human y wonderful *Anastomoses* for the preparation of Seed; for if you blow up the

Vena Spermatica, both the right and left Vessels of the Womb are blown up: from hence you may understand the Communion of all the Vessels of the Matrix.

XXI. Of the Testicles in Women.

§ 1. *The Testicles differ from those in Men in these following things*. 1. *In Scituation*, for these are placed within the *Hypogastrium*, about two Inches above the bottom of the Matrix, in such Women as are not with Child, being tyed by certain Ligaments. § 2. *In magnitude*; for these are lesser than the Testicles in Men: for by reason of their heat they are contracted after the woman is 14, whereas before that Age, they are more large, being full of a white juyce. § 3. *In their Surface*; for these are more uneven than those of a Man. § 4. *In their Figure*: for these are more broad and flat on the fore and hinder parts: they are also more hollow, and fuller of Spermatick moisture. § 5. *In their substance*; for these are softer, and if you take off the Membrane, you will find them conglomerated or knobbed together of divers little Kernels or Bladders, five or six or more, which contain the thick Seed. § 6. *In their Membranes or Coats*: for whereas Mens have four Tunicles, these have but one, because they are in a closer and warmer place: this single Coat is called by *Galen*, *Dartos*: but where they receive the Seminal Vessels, they are half covered over with the *Peritoneum*. § 7. *In their Connection*; for they are knit to the

sides of the Uterus, by two manifest passages, viz. by the two upper Ligaments, which are loose and membranous, and out of which in the time of Coition, the Seed is cast. § 8. In their Appendices; These have no Parastatae nor any Cremasters, but are stayed by the broad lateral Ligaments called the Bats Wings. § 9. Their use is to make, elaborate and perfect the Seed.

XXII. Of the Vasa deferentia in Women.

§ 1. They spring from the lower part of the Testicles and are either inserted with a very short passage into the bottom of the Womb; Or disseminated at the Trumpets of the Womb, with sundry exceeding small sprigs, not much unlike the Venæ Lactæ arising from the Vasa præparantia, and continued with them, though here changing their name and use. § 2. Their substance is firm, white, and nervous. § 3. They pass by the membranous Ligaments to the Matrix, not straight, but wreathed or twining, with a multitude of Windings; that the shortness of the Way might be recompensed by such a Laborinth. § 4. Near the Testicles they are broad, afterwards they become narrower and smaller, and about the Womb, they become broad again, and are inserted into the Cornua, and capacity of it. § 5. Their use is partly to carry the Seed to the Trumpets of the Womb, to be there farther perfected, and better elaborated, and to be kept for use: And partly to carry it to the bottom of the Womb, where another branch runs into the Neck, by which way

also the Seed is voided, causing (by reason of the length of the way) the greater delectation.

§ 6. The Tubæ Fallopiæ, (so called from their likeness to a Trumpet of War, and because Fallopius found them out) are two in number, one on each side; of a nervous, white, thick, and hard substance; and of a figure long, round, and hollow. These Sirigelius lib. 8. cap. 20. calls Vasa Cæca, because they have but one Orifice. § 7. They arise from the bottom of the Womb (from the Horn of the Womb saith Fallopius) at one end; and when they have gone a little therefrom, they grow broader by little and little, crisping themselves like the Tendrils of a Vine, till they come towards their ends. Then dismissing their wrinkled Crispations, and becoming very broad, they end in a certain extremity, which seems membranous and fleshy by reason of their red colour, and at last become very torn and ragged, like the jagged edges of Worm Clouts, having large holes which lye always shut, those jagged ends ever falling in upon them, which notwithstanding, if they be diligently opened and widened, do represent the broad end of a Brazen Trumpet. § 8. They pass obliquely from the Cornua over against the Testicles, being carried by the membranous Ligament, and (as it were) half compass the Testicles, but are distant from them every where about half an Inch, they neither proceeding from the Stones, nor being inserted into them: and as in their beginnings they are

open, so in their endings they are shut up and Blind, not reaching so, or being inserted into any other remarkable part. § 9. They are commonly fastned by very thin Membranes, not much unlike the Wings of Bats or Flitter-Mice, through which, many Veins and Arteries are disseminated from the Testicles into their hollownes; by which the Seed is conveyed from the said Testicles into these Tube or Trumpets.

§ 10. Their insertion at the bottom of the Womb is large, whence springs a nervous Pipe, stretched out nearly to the middle of the Trumpet, that by it the Seed may be sent into the bottom of the Womb: Their middle is capacious with certain little Cells or Bladders, containing white Seed; after which they are wreathed and crisped: their end is narrower again, and blind as is aforesaid. § 11. Now what the Vesicæ Seminales are in Men for to preserve the Seed, such are these blind passages in Women: for that they are annexed to the Stones by the aforesaid little Membranes through which many little Veins pass, through which the concocted Seed is carried, and here laid up as in a Store-house, where also by the irradiation of the Virtue of the Testicles, it is yet better digested, and made more perfect; from whence in the time of Coition, it is by the strong sent into the Cavity of the Womb.

XXIII. Of the Uterus, Matrix,

§ 1. The Uterus, Matrix, Ovary, and the Womb, are all the

nical part, the receptacle both of the Seed and of the Child: and it is situate in the middle of the Hypogastrium called Pelvis, the Basin, by the Os Sacrum, and the Flank bones, between the Intestinum rectum and the Bladder.

§ 2. Its magnitude even in Virgins of big stature, exceeds not the bigness of a Walnut: but in Women with Child it dilates it self, into such a Capacity as to contain the Child: Nature made it at first small, that it might embrace the Seed round, and cherish it, because it is but little in quantity. § 3. Its figure is said to resemble a Pear: but Fallopius saith, That its bottom most of all resembles a Gourd, but the Neck thereof resembles an oblong and round Pipe or Channel. § 4. Its connection is either by the Neck or by the bottom: the Neck is knit by its own substance, and by Membranes; but by the bottom by peculiar Ligaments. On the fore-side the Neck is joyned to the Vesica, and the Os pubis, by Membranes from the Peritoneum; on the hind-side, to the Os Sacrum and Intestinum Rectum; but about the Vulva, it grows together with the Anus; on the sides, it is loosely joyned by Membranes to the Peritoneum. The Fundus or bottom is not tyed by its substance, but is free; but in its Sides, it is fastned by two pair of Ligaments, which keep the Womb suspended, or hanging loose. § 5. The upper pair is broad and membranous, which are joyned to the Os Ilium, and end in the bottom, near the Cornua: they are soft and loose,

that

that they may distend or contract; and by *Aresæus* they are likened to the Wings of Bats: if these Ligaments or Muscles be loosned or broken, by difficult Labour, or other violence it may cause the falling down of the Womb. § 4. The two lower Ligaments are red like Muscles, and round, like Earthworms, and pervious to the Clitoris, from whence (like a Goose foot) destitute altogether of their hollownes, they spread themselves upon the forepart of the Thigh. These arise from the sides of the bottom of the Womb, touching at their beginning the *Vasa deferentia*, then ascending to the Groins, they pass through the Productions of the *Peritonæum*, and the Tendons of the obliquely descendent Muscles of the Belly, and are partly obliterated in the Membranes of the Bones near the Clitoris, where they are joyned, degenerating into a broad and nervous thinness, almost like a Goose foot, as aforesaid; and partly run through the inner part of the Thigh to the Knee: Hence it is, That Women in their first months going with Child, complain of a pain in the inside of their Thighs. § 6. The substance of the Womb is membranous, that it may be distended or contracted as need shall require: it is full of wrinkles, which in Women impregnated are extended to widen the Womb, which after exclusion of the Child, as also in Age are again contracted. § 7. The Membranes of the Womb are 2, one common, the other proper. § 8. The common is doubled, and

grows to the sides on each band: it arises from the *Peritonæum*, and is exceeding thick, firm, strong, smooth every where, except where the *Spermatick Vessels* enter, or the Ligaments go out. § 9. The proper and internal Membrane is also double, between both which there are fleshy Fibres, such as are found in the Stomach, with also here and there a kind of spongy substance. § 10. The Womb has Veins and Arteries accompanying one another, which are carried between the Tunicles or Coats thereof, & cast out their Blood into its membranous Pipes, but not into its innermost Cavity: these Vessels arise both from above and beneath, viz. from the upper and lower parts of the Body; for the Blood ought to come from the whole Body, that the whole may by the monthly terms be purged, and that in the time when a Woman is impregnated, the Child might be nourished. Those which descend from above run all the Womb over, especially in the *Fundus* or bottom, being derived from the *Spermatick Vessels*, or those by which the *Vasa preparantia* are constituted, as also from the *Hæmorrhoidal* branch, whence is the great consent between the Womb and the Spleen: the left ends also of the Veins and Arteries are joyned with the right ends, that the right side may be supplied with plenty of Blood. § 11. Through the Arteries (in Women not with Child) the menstrual Blood always flows; what is not thus evacuated, returns back again to the

the heart by the Veins, which are joyn'd to the Arteries by many *Anastomoses*. § 12. *The Veins & Arteries which come from beneath, which are larger than the former, spring from the Ramus Hypogastricus of the Cava, and Aorta, and running through the Neck of the Womb, and lower part of the bottom, are every where joyned with the superior ones by manifold Anastomoses, as aforesaid.* This is easy to be observed in dead Bodies by blowing them up, for that they will all swell by one and the same Blast. The Mouths of these Vessels do enter into the Cavity of the Fundus, which in the time of the flowing of the Terms, are opened and Gape, and because they resemble Cups or Sawcers, are called *Acetabula* or *Cotylidones*: To these when a Woman is with Child, the *Placenta* is joyned, which receives the Blood for nourishment thereof. And because these Branches are carried to the Neck of the Womb, by them Women which are with Child, sometimes also void their *Menstrua's*. § 13. *It is furnished with many Nerves from the Par Vagum, and the Nerves of the Os Sacrum, which run to the Os Uteri, and parts about the Vulva for delectation sake, and to the lower part of the Fundus, as also to the upper part thereof, where they are interweaved like a Net; hence arises the great Sympathy between the Womb and the Brain.* § 14. *The use of the Womb is to attract, receive, retain, preserve and cherish the Seed in order to Conception: and after*

Conception to contain and nourish the Fetus till the time of Birth. § 15. *The short Neck of the Womb, which has its inner Neck, is that which contains the Orifice leading immediately into the Cavity of the Womb, this Orifice is a hole not large, but such as may admit a Probe or large Quil, and like a Mouth may be dilated or pursed in: this entrance is but a transverse line, which when it is exactly opened becometh round: this hole after Conception is so closely shut, that it will not admit the point of a Bodkin; but at the time of Delivery, it opens itself wide, according to the magnitude of the Infant, be it never so great.* § 16. *The Cavity of this Neck is rough, arising from Wrinkles, whose edges tend inwards, least the Seed which has been cast in, should flow out again, as is seen in such Barren Women, who have the slipperiness of the Womb.* § 17. *The Fundus or bottom, is the most capacious part of the Womb, seated above the Os Pubis, that it may be there distended: Its Cavity is one only, without Cells, as some Anatomists have falsely taught; and without manifest Horns (as Beasts have) save on the sides of the bottom there are small protuberancies, (called Horns) where the *Vasa deferentia* are inserted. § 18. *The external surface of the Womb is smooth and even, covered as it were with a kind of humidity: Its inner surface is full of Porosities, which are mouths through which in time of a Womans breeding, Blood passes out of the Vessels of the Womb, to nourish the Child.**

Child: § 19. Within the Orifice of the inner Neck grows a certain Caruncle, which does more exactly fill the hole (as Riolanus saith,) in which Caruncle are to be seen Pores which seem to be at the end of the deferent Vessels, terminating at the Neck. This neck of the Womb is opened in Superfétation, in an Abortion, in an ejection of a false Conception, but especially after a wonderful manner at the time of Child-Birth, when it is widened according to the magnitude of the Child: At this (saith Galen) we may Wonder, but we cannot understand it: therefore it is our Duty to acknowledge the Wisdom and power of him that made us: § 20. The external or greater Neck of the Womb, called by Fallopius Sinus Pudoris, is a long Channel, hollow (even while the Child is in the Womb) and situate between the Vulva, and internal Orifice of the Womb, being that passage which receives the Penis in Coition. Its figure, is long (nearly 7 Inches) hollow, (large enough to entertain the Penis) and wrinkled within: but its length and wideness are hardly determinable, some say, it is as wide as the Intestinum rectum, but it is longer or shorter, wider or narrower, according to the Lust of the Woman, the Penis being always in Coition closely embraced by it. Its substance is a hard and nervous kind of flesh, and a little spongy like the Yard, wrinkled within (chiefly in its upper part) that it might be occasionally dilated. § 21. Lastly towards the middle or external part of this

greater Neck, in the fore and upper part near the Vulva, is the insertion of the Bladder into sight, that from thence the Urine may be voided by the Meatus Urinarius, which is short and straight, but dilatable, to the taking out of large Stones, as big as Walnuts, or, as some say, as large as a small Hens Egg, by the help of a fitted Speculum Matricis: it is without covered with a fleshy Sphincter, but within (as Pineus observed) black, and as Riolanus saith, of the same substance with the Urethra in Men.

XXIV. Of the Membrane called Hymen, Or the Note of Virginity.

§ 1. Ὑμην, ὠγυγον, Hymen, Eugion, media pars inter naturalia muliebra; quidam etiam claustrum Virginitatis interpretantur: The sign or flower of Virginity, because it can be found in none but Virgins: It is called the flower of Virginity from the Blood which flows in the first Coition. § 2. That there is such a thing is not to be doubted, for that we have such great Authorities for it: first, it was the undoubted sign of a Virgin among the Ancient Hebrews, as Moses has at large declared, Deut. 22. Secondly, it was a received and known thing in all the Eastern Countries, as Leo Africanus affirms: Thirdly, the experimental Testimonies of Vesalius, Fallopius, Aquapendens, Casserius, Archangelus, Carpus, Bauhinus, Walsius, Spigelius, Vesslingus, Paræus, Sebizus, Columbus, and Bartholinus, all which were great Anatomists: Scaliger has acknowledged it: Wol-

Wolffius found it at Padua. *Veslingus* and *Bartholinus* both saw it at one time. *Columbus* and *Sebizius* found it thrice. *Spigelius* affirms, That he found it in all the Virgins that ever he cut up. § 3. *If any wish Laurentius shall say, it can never be found, or with Paræus, it is not always found, We answer, first, the Testimony of holy Scripture is clearly against them. Secondly, the experience of all the most able Anatomists in the World. Thirdly, These Men might either want Bodies to dissect, or be careless in their Work: Or, if they dissected young Virgins, they might be such as through Wantonness had broken it with their Fingers: if where it is found, they shall say, it is preternaturally present: by the same reason we may say, where it is wanting it is preternaturally absent. Therefore with Bartholinus we Conclude, That in Virgins who have used no violence to the part, nor have it fretted, eaten or broken, by any defluxion of sharp humors, that in such it is never wanting.* § 4. *What it is, we now come to inquire into: first, there be some say, it is a transverse Membrane, and they are indeed in the right: but they who would have holes in it like a Sieve, are deceived. Secondly, Others say, It is a transverse Membrane going cross the Neck of the Womb, a little above the Neck of the Bladder, which resists the first entrance of the Penis. Thirdly, Sebizius saith, That if this Membrane is absent, we must rest in the straightness of the Neck and other Marks,*

which being widened in the first Coition, pain and effusion of Blood follows, by reason of the Solution of continuity. Fourthly, Severinus Pinæus, (whose opinion is the newest of all,) saith That the four Myrtle shaped Cruncles, tyed together by a small Membrane placed in the outer part of the Neck of the Womb is the true Hymen so much sought after; and without doubt Pinæus is in the right: to this Bauhinus agrees; and Bartholinus saith That he could find no other in a young Girl lately dissected. § 5. *It is scituate in the Neck of the Womb, just behind the insertion of the Neck of the Bladder, or a little more inwards: but its scituation does now and then vary a little: there this Membrane goes cross the Cavity, much like the Diaphragma or Midriff.* § 6. *As to its figure, it has an hole in its middle, big enough to receive a Penis, by which the menstrual Blood passes: Aquapendens saith, That sometimes it is no hole, but a kind of long Chink: Sebezius saith, That the passage is sometimes like the horned Moon a little full; so that Nature sports her self in the variety of Shape. If it be without any hole, so that the Courses cannot flow, thence comes Diseases, and (if it be not opened) at last Death.* § 7. *It is connected orbicularly to the Neck of the Womb, as if it grew out of the same, where it is thicker than in the middle: Its substance is partly membranous, partly fleshy, yet not very thick: Some say, It is nervous: It is interlaced with many little Veins, which being broken in*

in the first Coition, pain and bloodshed follows, even as it does in some men, where the *Frænum* or Bridle of the *Penis* (being exceeding short and straight) is torn or rent asunder. § 8. *Its use is to defend the Internal parts from Injury; as also to be the sign of Virginity.*

XXV. Of the Vulva, or external privy.

§ 1. *Δελούς, Vulva, The external privy, which is that which offers it self to sight before Dissection, being located under the fore-region of the Os pubis: we shall first describe the more inward parts; then the more outward.* § 2. *The more principal internal parts are the wrinkled chinks, the four Myrtle shaped Caruncles, the Orifice of the Urinal passage; and the Clytoris: the more external parts are the Wings, the Lips, the great Chink, and the Pubes, or hairy part.* § 3. *The wrinkled and inward Chink: this is the immediate mouth of the larger neck of the Womb, lying behind the four Myrtle shaped Caruncles: it is of a reasonable largeness, and framed by nature to stay the Seed cast into the neck from too quick slipping out.* § 4. *The myrtle shaped Caruncles. These are placed so as to appear in a quadrangular form, one at each corner: One of them is placed before or above in the circumference of the hole of the Urinary passage to shut the same, it being largest and forked, that it might receive the end of the *meatus Urinarius*, and hinder external things from entering: The Second is opposite to the*

former, and is scituate below: the two remaining ones are placed collaterally: *Their Figure resembles a Myrtle berrie: Their magnitude is various: Their Substance is framed of the reduplication of the fleshy neck of the Womb, being partly flesh, partly membranous: They are connected as Pineus saith, with Membranes, which he calls Valves: Their uses are for titillation in the time of Coition, and also immediately to shut the Orifice of the Neck, that Air, dust nor any other foreign matter may enter.* § 5. *The Orifice of the Urinal passage. It is a hole under the Clytoris above the neck, through this Women make water, and it seems to be shut with a kind of fleshy Valve.* § 6. *The Description of the Clytoris: It is called Κλωνίς, Clitoris, by some Nympha, by others Tentigo, by others the Womans Yard, because it resembles a mans Yard in figure; substance, composition, repletion with spirits, erection and scituation. Its Figure is somewhat like the *glans* and *præputium* of the *Penis*; but it is commonly small, being seated in the middle of the *Os Pubis* in the upper and former end of the *Fossa magna* where the *Alæ* or *Nympha* meet; but in its beginning for the most part it lies hid under the *Nympha*, and afterwards sticks out a little. Its substance is like that of a mans Yard, consisting of two Nervous bodies, hard and thick, but within full of a black and spongy matter, as in the lateral*

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Ligaments of the Yard. *The two lateral Ligaments* arise from the internal knob of the *Ischium*: the third is between these, springing from the joyning of the *Os pubis*. Its Muscles are the same in nature and number with those in a man. Its extremity is the *Glans*, which hath a superficial hollowness, but not bored through, this is covered with a very thin skin as a *prepuce*, which springs from the joyning of the *Nymphæ*. It has Veins and Arteries common to it and the Privy, and a Nerve from the *Par Vagum*, larger than its body might seem to require, to give it an exquisite sense, and cause erection. In it is the seat of Delectation and Lust. § 7. *Of the Alæ or Nymphæ, commonly called Wings.* These appear when the two lips are severed, being two productions made of a soft and spongy flesh, and the reduplication of the *Cutis*, and situated at the sides of the neck between the two lips: being joyned above, they compass the *Clytoris*: They are in number two; in colour red like a Cocks Gills; in figure almost triangular; but much resembling a Cocks comb: in substance partly membranous, partly fleshy. Their use is the same with the *Caruncles*, as also to convey the Urine strait out, that it might not wet the lips. § 8. *Of the Labia or Lips.* These are two in number, by which the internal parts are covered: they are constituted of the common Teguments of the body, and a pretty deal of spongy fat:

the lower joyning of these Lips is in Virgins somewhat strait and seem of a Ligamentous substance for firmness, but in married Women it is loose, and such as have had a Child yet looser. § 9. *Of the Fossa or Rima magna, called also Fossa Navelicularis, the Great Chink.* It begins at the *Os pubis*, and is not much above an inch distant from the *Anus*, being much larger than the inner chink, or cavity of the neck of the Womb, this is seen as soon as ever the lips are drawn aside: in this Fossa the lips being opened, two holes appear (but scarcely visible), out of which a whitish or wheyish juice issues. In this Fossa are also two collateral chinks, the right and the left, which are between the Lips and the Wings. § 10. *Of the Pubes, called also monticuli Veneris.* This is the part where the Hair grows, and is properly termed the Privy; being longish hillocks soft, and of a substance, the like whereof is not to be found again in the whole body, being partly skin, partly spongy flesh, placed upon a portion of hard fat.

XXVI. *Of the Membranes enfolding the Child in the Womb.*

§ 1. *The Membranes enfolding the Child in the Womb, are the first things which are bred in the Womb after Conception, to defend the more excellent part of the Seed: Their efficient cause is the formative faculty, joyned with the heat of the Womb, which in human kind are in number only two, viz. the Amnios and the*

the Chorion, to which latter belongs the Placenta or Womb-Cake; all these together make that thing which we call the **SEGUNDINE**, or After-birth, § 2. It is so called, because it is the second habitation of the Child next the Womb; and also because it comes away by a second Birth, after the Child or first Birth. Some Authors, as Spigelius for one, make a third membrane, called *Allanoides*, the Budding membrane, because it compasses the Conception round like a Girdle; but he was deceived, for this Membrane is only to be found in Beasts, not in mankind. § 3. **AMNIOS** (from its softness and thinness) is the first Membrane, (called also *Agnina*, *Indusium*, *Charta Virginea*;) It is the thinnest of the Tunics, white, soft, transparent, and furnished with some few small Veins and Arteries, which are dispers'd within its foldings. § 4. It compasses the Child immediately, and cleaves almost every where to the Chorion, especially at the ends; and united in the middle thereof, about the Placenta, where the *Vasa Umbilicalia* come forth, but it is easily separated from the said Chorion. § 5. It contains within it plenty of humidity and humor, in which the Child does as it were swim, that so 1. the Child floating therein, may be the higher and less burthensome to the Mother. 2. That the Child may not strike against any of the neighbouring hard parts. 3. That the Membranes being broke, and this humor running out at time

of Birth, may make the Childs way through the neck of the Womb, smooth, slippery and easy. This humor thus falling, is that Mid-wives call the breaking of the Water. § 6. Part of the Amnios does now and then hang about the Head of the Child, and then the Infant is said to be Born with a Caul: Some take this for a presage of Good, some of Evil, some of short Life, some of long, but it has relation to none of these things, for it has been found on the Heads of both happy and miserable, of both short and long lived persons. § 7. **CHORION** is the second Membrane, and compasses the Child like a Circle: This immediately compasses the former, and lyes beneath it, whose inner and hollow part it covers and invellips, extending it self, according to the magnitude thereof: It is with some difficulty separated from the Amnios, and strongly bears up and unites the Vessels to the Placenta. § 8. That side next to the Child is smooth and slippery (except where it is fastned to the Placenta:) the other side is affixed, immediately to the Womb, by the said Placenta, which is for the most part on the upper and fore-side: It does not encompass the whole Child, being constituted of innumerable company of Veins and Arteries, between which, Blood out of the Vessels seems to be shed. § 9. The **PLACENTA UTERI**, or Womb-Cake, (because of its shape) called also *Hepar Uteri*, the Womb-Liver, (from its nature and office) is a round Mass of flesh, furnished with divers Vessels,

sels, through which the Child receives its nutriment. § 10. *It is in number but one, even in those who bear two or more Children at once, for so many Cords are inserted into it in divers places.* § 11. *Its magnitude is various, yet it is found about ten or twelve Inches Diameter.* § 12. *Its substance seems to be constituted of an infinite number of little Fibres, with congealed Blood interposed: but its Parenchyma is not every where a like, for in some places it is glandulous, and thicker, being variously interwoven with Capillary Veins.* § 13. *Its figure is roundish, yet with an uneven Circumference; in which Bartholine observed five Prominences ranked in due order; and the Membrane Chorion in the intermediate spaces thicker than ordinary: that side next to the Womb has great Chinks in it, which being cut, shews an infinite number of Fibres of Veins.* § 14. *It has Veins and Arteries running through it from the Umbilical Vessels, which are at length lost about the edges of the Placenta, making wonderful contractions, and closely knit to the substance thereof, being joyned together by various Anastomoses, through which the Blood in the Child runs back out of the Arteries into the Veins.* § 15. *It is first, to be a support to the Navel Vessels under which it lies: Secondly, to prepare Blood (being a singular kind of Parenchyma) to nourish the Child, as the true Liver does in grown persons. This Blood it sucks out of the Veins of the Womb, and preparing it for use, sends it through the greater Um-*

bilical Vein to the Liver of the Child, that so it may be carried to the Heart, out of which it is sent by the Arteries into the whole Body of the Child for nourishment.

XXVII. Of the Umbilical Vessels.

§ 1. *Vasa Umbilicalia*, the Navel Vessels, (so called because the Child being excluded, they are found to Center in its Navel) are in number four, viz. one Vein, two Arteries, and the Urachus: all which are covered with one common Membrane or Coat which both encloses all those Vessels, and distinguishes them one from another, that they might neither be intangled, or broken. § 2. *Vena Umbilicalis*, the Navel Vein, passing through the two Coats of the Peritonæum is inserted into the Liver by a Cleft, (going through the Navel sometimes single and sometimes double:.) It is about five Foot and a half in length, being measured to the Placenta: it is variously rowled or twisted about, that its length might not prove troublesome: from the Navel it goes over the Breast, from whence it is obliquely carried over the right and left sides of the Throat and Neck, turning it self back at the hinder part of the Head, and so over the middle of the Forehead to the Placenta: Sometimes also it encompasses the Neck like a Chain, all which you are to understand of the whole Cord or Navel-string, with the rest of the Vessels contained therein. Its use is to convey the maternal Blood from the Placenta, through the Na-

Navel, to the Liver of the Child for its nourishment. § 3. *The two Umbilical Arteries (which are much less than the Vein) are inserted into the Iliack Arteries, and carried with the Vein to the Placenta, where it is scatted into manifold branches, but no where joyned to the Arteries of the Womb, as Arantius has certainly observed: These Capillary Arterial branches are joyned with the Capillary Venal branches by innumerable Anastomoses within the Placenta: Sometimes these Anastomoses are made by going cross one over another both internally and externally: Sometimes by Insertion. Sometimes by coupling Side by Side: Sometimes by being twisted together: The Arteries, run about the Veins, sometimes accompanying them, and sometimes creeping alone: but the Solitary Veins are supposed to draw fresh Blood out of the Womb. The use of these Arteries is, to carry back the Arterial Blood to the Placenta, which is superfluous to the nourishment of the Child, that it may be again made more perfect, and be then returned by the Hairy twigs of the Veins, with the fresh Blood coming out of the Womb, and so kept in a circular motion.* § 4. *Between the Childs Navel and the Placenta, these Vessels pass-a-long like a Cord or Chord, well twisted together, much resembling the windings of the commonly said Unicorns Horn: which is contrived, first, for the better separating of the Blood: secondly, that each Vessel might*

the better be upheld and keep its course: *thirdly, that the Child might receive its nutriment by degrees, and not be in danger of Choaking.* § 5. *In this Navel-string there are Knots transparent in the Veins but not in the Arteries, which are nothing but a more thick and fleshy constitution of the Membrana Carnosa in those parts: From the number of these Knots foolish Mid-wives foretell how many Children a Woman shall have, but these are vain Divinations, for there is often more Knots in the Navel of the last Child, than of the first.*

§ 6. *It is (as aforesaid) about five foot and a half, or six foot long, and about the thickness of a Mans Finger: when it is dry it becomes smaller, and is kept as a precious thing to hasten the Birth in other persons.* § 7. *The Child being Born, this Navel-string must be tyed with a strong Thread wound often about, the distance of two or three Inches from the Belly of the Infant, and about three Inches from the binding it must be cut off: afterwards the Navel is to be carefully lookt to till it is dry, and falls off, of its own accord.*

§ 8. *These Vessels after the Child is Born, do within the Abdomen degenerate into Ligaments: the Vein to a Ligament of the Liver, and the Arteries into Lateral Ligaments of the Bladder, because their use is now abolished, there being no longer any passage of the Mothers Blood.* § 9. *The Urachus or Piss-Pipe, (improperly so called) which is not half so big as one of the Arteries consists (as Riolanus saith) of two parts, viz.*

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an inner which is nervous, springing from the inner Coat of the Bladder : and an outward, which is more membranous from the bottom of the Bladder : this goes not without the Navel, nor is it hollow throughout, as *Carpus, Arantius, Riolanus, Bartholinus*, and others truly affirm : but it is a little Cord or Ligament, by which the Bladder is sustained and fastned to the *Peritonæum*, that being distended with Urine, its Neck might not be compressed, which thing also is done by the Arteries. § 10. Hence it ap-

pears that Urine is not voided by the Urachus by a Child in the Womb, as the Antients have imagined : but it is certainly voided by its Yard into the Membrane *Amnios*, (whence it is that it is so full of Water) a great part of it yet remaining in the Bladder, which is the Cause that always new-Born Children, are for the first days continually Pissing : If that the Urine were not in part thus voided, the Bladder would not only be over stretcht but broken.

CHAP. IX. Of the THORAX.

I OF the Thorax in general.

§ 1. The Thorax, Chest, or Breast, is that which is called the middle Ventricle, and by some absolutely Venter : being circumscribed above by the *Claviculae* : beneath by the *Diaphragma* ; on the fore side by the *Sternum* : on the hinder part by the Back-Bones : and on each side by the *Casse* or Ribs. § 2. Its situation is between the upper Ventricle or Head and the Abdomen, being the Seat of the vital Spirits, and consisting of these principal parts : first, parts containing : secondly, parts contained, all which are appointed for cherishing the natural heat. § 3. Its figure is almost Oval, somewhat flat before and behind, whereas, in Beasts it is somewhat sharp, so that mankind only lyes on the Back. § 4. Its substance is partly boney,

partly fleshy : boney, because it contains not any parts much to be distended : fleshy, because it contains parts which ought to be moved, as the Heart and Lungs. § 5. The parts containing are either common or proper. § 6. The common are those which are found also in the Abdomen, viz. the *Cuticula, Cutis, Pinguedo, and Membrana Carnosa*. But this is to be observed, that the Skin of the Thorax is Hairy under the Arm-holes, which Hairs are called *Subalares Pili* : as also upon the Breast in such as are of a strong and hot Constitution. Moreover the Skin of the Back is of an exquisite Feeling : first, because many twigs of Nerves are bestowed upon it from the Nerves of the *Spinalis Medulla* : secondly, because of the Muscles of the Breast placed there, which have many

many very sensible Tendons.

The Fat of this Ventricle is very little (the Dugs excepted) *first*, because the natural heat is sufficiently preserved without it: *secondly*, because by its weight the respiration might be hurt or somewhat hindered. § 7. *The proper parts are*, 1. The Dugs. 2. The Intercostal Muscles. 3. The Diaphragma. 4. The Pleura. 5. The Mediastinum. § 8. *The contained parts, are*, 1. The Thymus. 2. The Pericardium. 3. The Heart in general. 4. The appurtenances of the Heart in special. 5. The Vena Pulmonalis. 6. The Arteria Pulmonalis. 7. The Lungs. 8. The Lung-Pipe. 9. The Larynx. 10. The Oesophagus or Gullet. 11. The Neck. § 9. *Its Vessels are the Branches of the Vena Cava, and Arteria Magna, underpropped with the Thymus, or Kernel in the Throat: with variety of Nerves from several Originals.*

II. Of the Breasts or Dugs:

§ 1. *The Dugs are given to both Sexes: in Men they are framed of the Cutis, the Membrana Carnosa, Fat, and the Nipple, and serve chiefly for Beauty, and are called Mammillæ.* § 2. *The Dugs in Women have besides, many remarkable Vessels, Glandules, and Pipes, to make and contain Milk.* § 3. *The situation of the Dugs is in the middle of the Breast above the Pectoral Muscle, which draw to the Shoulder. The chief reason of this Position is*, 1. For the more convenient giving of Suck, because the Child cannot presently walk after the manner of Beasts, but must be held in the

Mothers Arms and applied to the Dugs. 2. That being near the Heart, they should receive plenty of heat, and be also a defence to the Vital parts. 3. For comeliness and beauty sake. 4. That the Mothers beholding and talking with the Child, it might learn to Speak, and be indued with Reason. § 4. *The Dugs are but two in number, that if one should fail the other might supply the defect.* § 5. *Their magnitude in Girls newly born is very small, so that there is only a mark visible in the Breast: afterwards by little and little they swell: being raised about two Fingers high, their courses begin to flow: at last they come to the bigness of large Apples: but in Women with Child they swell yet more, and are still increased towards the last Months. In the Kingdom of Senega, Women's Dug hang as low as their Bellies, in the Isle of Arnabo, it is said they turn them over their Shoulders, and suckle their Children that way; the same report have I had from several Irish Women, that in Ireland many such Women are to be found.* § 6. *Their figure is roundish, representing as it were an Hemisphere: but in some by reason of their very great weight and hanging down, they are longish.* § 7. *The Dug is divided into two parts, to wit, the Nipple, and the globular substance.* § 8. *The Nipple or Teat (called Papilla) which is spongy, like the Glans of a Mans Yard, and perforated through the middle with many small holes for the Milk to pass through. It has an excellent*

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& exquisite sense of Feeling, because it is as it were the Center into which the ends of the Veins, Arteries and Nerves do all meet: this is evident from its red color, and delicate sense: in such as give Suck, it inclines to black and blew; in such as are past Child-bearing they are of a black color. It is rougher than the other parts of the Dug, that the Infant may the more firmly hold it, and of an exquisite sense, that the Nurse should find some Pleasure when she gives Suck: round about it, there is a Circle called *Arcola*, in Virgins it is pale and knotty: in Nurses, brown; and in old Women black. Its use is to be put into the Mouth of the Child to give it Suck. § 9. *The globular substance of the Dug does inwardly consist of a Membrane, Fat, Glandules, and Vessels of Nerves, Veins, and Arteries.* § 10. *The fleshy Membrane does fasten the glandulous substances, which it compasses, unto the Muscles lying under the same.* § 11. *The Glandules are many not one, that the Milk might be the better elaborated.* In Virgins they are more hard; in old Women consumed; in such as are with Child and give Suck, swelling and pappy. Just under the Nipple there is a great one, which the other lesser ones do compass about, and infinite Textures of Veins and Arteries lye between them. § 12. *Between these glandulous Bodies and Vessels lies the Fat, which is plentiful, placed to encrease and conserve the heat, and to procure smoothness and equality to the part: if this become wast-*

ed by sickness or old Age, the Dugs become flabby, and hang ill favoredly. § 13. *They have Nerves from the fifth of the Thorax to cause Sense, and they end in the Nipples.* § 14. *The Veins are two-fold, viz. external and internal: The external arise from the Axillary, and are placed under the Skin which moves the Dugs, and are called Thoracice Superiores, the upper Breast Veins: these in Women with Child and such as give Suck, are often seen very blew, or blackish.* § 15. *The internal arise, or descend (on each side one) from the Trunk of the Axillary Vein, or Ramus subclavius, and are called Mammariæ Venæ, or Dug-Veins: these are met by other ascendent Veins from the Womb, and therefore the Child being Born, the Blood is carried no longer to the Womb, but (as Authors think) to the Dugs; and hence it is, that Women which give Suck, seldom have their Courses. When these Mammariæ are come to the Mucronata Cartilago, they pass out of the Breast, and go downwards to the lower part of the Musculi recti: When they are come almost to the Umbilical Region, they are joyned in the Skin to the Venæ Epigastricæ by manifold inosculations. These Venæ Epigastricæ spring from the external Ramus Illiacus, and by a strait way pass upwards under these Muscles. From this same branch spring the Venæ Hypogastricæ, which are inserted into the Neck and bottom of the Womb.* § 16. *The Arteriæ Mammariæ spring in like manner from the up-*
per

per trunk of the Aorta, and from the *Rami subclavij*, which go down to the Navel, where they are joyned after the same manner by Inosculation with the *Arteriae Epigastricae* ascending. § 17. Besides these Vessels, the Dugs have Pipes, which are white springing from the whole circumference of the lower part, which growing narrower do always meet together, wherein Milk (being made) is preserved for use, viz. to give the Infant Suck: when this use is over they grow as small as the Capillary Veins. § 18. The use of the Dugs, is first, to be a safeguard to the Heart. Secondly, for Beauty and Ornament. Thirdly, to breed Milk, thereby to nourish the young Child. § 19. Now how Milk is generated and made we shall here declare our opinion. The efficient cause thereof cannot be the Womb, for there Milk was never observed; nor do the Dugs breed it, for that Virtue they want: but it is generated and made by Virtue of the Inbred Spirit, and a proper Fermentum contained in the part, which by virtue of the said Inbred Spirit has power to change the matter into the form or similitude, yea, and into the very absolute nature of Milk. § 20. But of what Milk is made, the opinions of Men are various. Some think it to be made of the Venal Blood; but they are absolutely deceived: Some think it to be made only of Arterial Blood; and these Err also from the Truth: Others as *Martianus* and *Castellus* say, it is made of Blood and Chyle; these come very near to

Truth, but have not absolutely hit the White. This the said *Martianus* and *Castellus* have defended by about thirteen several Reasons or Arguments, too tedious to be here inserted. Others have thought it to be made only of Chylus, which they have also defended with no small Argumentations. § 21. But our opinion is, that it proceeds from, and is generated of the Chylous juyce, and a Serous part of the Arterial Blood: for (as *Bartholine* saith) nothing is more easy to imagine, than the passage of the Chylus to the Dugs by the new Lacteal Veins of the Thorax, for that they diffuse their branches every way, as we have declared in cap. 8. sect. 7. § 45. foregoing: And for the Serosity of the Blood we have proved it to be separated almost every where through the whole Body from the Arteries, see cap. 8. sect. 8. § 29, 30, 31, and 32. foregoing: where we have proved that the Liquor separated in all the Glandules whether conglobated or conglomerated is one and the same, but by the Fermentum of each particular Vessel is made to differ, as after in sect. 10. § 21, 24, 25. of the same Chapter, where we have discoursed of the Gall juyce, we have more fully proved: Now the Dugs being Conglomerated Glandules, so the juyce which they generate is different from the juyces of the other Conglomerates, because the Fermentum of the Dugs is different. Now that the Serosity of the Arterial Blood (and not the substance of the Blood it self) does help to gene-

rate and constitute the Milk, we are induced to believe, not only from the foregoing reason, but because no *Anastomoses* of the Arteries, with the lacteal Pipes of the Dugs could ever yet be found out. And truly this opinion *Bartholine* seems to favor, where he saith, That all the Blood which is poured out of the Arteries into the Dugs, is not turned into Milk, but only the more serous or wheyish part thereof the rest (that which serves for nourishment excepted) running back again, by the Veins into the Heart.

III. Of the Muscles of the Thorax.

§ 1. The Muscles of the Thorax are either common or proper. § 2. The common are these of the Scapula's and of the Abdomen. § 3. The Muscles of the Scapulæ are four, 1. *Serratus anticus minor*, which brings the Scapula forward. 2. *Trapezius* or *Cucullaris*, which moves it upward, and obliquely backward. 3. *Rhomboides*, which moves it obliquely downward. 4. *Levator* to lift the Shoulder up. § 4. The Muscles of the Thorax common with the Abdomen are five pair, which see cap. 6. sect. 19. and cap. 8. sect. 2. foregoing. § 5. The proper Muscles of the Thorax are 12 or 6 pair, viz. 1. *Subclavius* or *Extensor*. 2. *Serratus anticus major*, or the inferior raiser up of the Ribs. 3. *Serratus posticus superior*, the raiser up of the Ribs. 4. *Serratus posticus inferior*, the depressor of the Ribs. 5. *Sacro-lumbus*, which draw the Breast together. 6. *Triangularis*, whose ule is the same. § 6. Musculi

intercostales, the Intercoastal Muscles are both external and internal, and of both there are eleven pair, all which perform the office of but one Muscle. § 7. To these we shall add the Muscles of the Back and Loyns, which are four pair, first, *Quadratus*, the flexor of the *Vertebrae*. Secondly, *Longissimus*, the first extender of the *Vertebrae*. Thirdly, *Sacrum*, the second extender. Fourthly, *Semispinatum*, the raiser up of the Back.

IV. Of the Diaphragma or Midriff.

§ 1. Ζώνη, Διάφραγμα, μεσθωα, Diaphragma, the Midriff, is a peculiar kind of Muscle, having an Action differing from all others. § 2. It is placed overthwart or cross the Body, but a little obliquely inclining downwards; being in shape circular, the long appendices excepted. § 3. Its magnitude answers the Diametrical wideness of the Abdomen; for arising from the *Vertebrae* of the Loyns, by a double fleshy production, it is fastned to the Chest round about, and is knit where it is fleshy to the extremities of the Ribs. § 4. Its substance is fleshy; but in the middle nervous and membranous: where a membranous Center shews it self, and a nervous Circle instead of a Tendon, to which fleshy Fibres do run from the Circumference of the Thorax, as to their Center: if this Center be wounded, it becomes mortal: it is nervous, for otherwise it could not be moved, nor would it be able otherwise to endure a perpetual motion, or suspend the Bowels which

which adhere thereto. § 5. It is covered with a double Membrane for firmness sake : The upper Membrane is from the *Pleura*, to which the *Pericardium* is firmly knit, and sometimes also the Lobes of the Lungs, by small Fibres. The lower Membrane is from the *Peritoneum*. § 6. It has several perforations, some very small, others great. The small ones are Pores through which vapors arise from the inferior parts. § 7. Of the greater perforations, one is on the right hand in the middle of the nervous part, through which the *Vena Cava* passes : Another on the left hand, greater, and more backward, through which the *Oesophagus* or Gullet passes, with two Nerves running unto the Stomach. Near its rise about the *Vertebra* of the Loyns, there is a division for the passage of the *Aorta*, and the *Vena sine pari*. § 8. It has Veins and Arteries from the adjacent Vessels, to wit the *Vena Cava*, and the *Aorta*, called *Phrenica*, and sometimes from the *Vena adiposa*. § 9. It has Nerves from the Spinal Marrow of the Neck, between the fourth and fifth *Vertebra*, which are spread through its whole substance, being carried through the Cavity of the *Thorax*, and underpropped by the *Mediastinum*. Now because the Nerves of the *Diaphragma* are in their passage mixed with some little twigs which are spread abroad into the Muscles of the Cheeks and Lips ; hence it is, that when the *Diaphragma* is struck or hurt, there arises a kind of Laughter. § 10. Its use is, 1. To cause a free

respiration by virtue of its motion (for a strong or violent respiration is performed by the Muscles of the *Thorax*, and *Intercostales*) now this motion is thus made, when the breath is drawn in, the *Diaphragma* is stretched : but when it is respired, it is remitted or slackned. 2. To assist the Muscles of the Belly, in exclusion of the Excrements, and the Child in the Womb, by thrusting it self downwards. 3. To distinguish and divide the *Abdomen* and natural parts, from the *Thorax* and vital parts, that vapors may not ascend to hurt the Heart and Lungs. 4. To be a Fan to the *Abdomen* (according to *Hippocrates*) to cool the *Hypochondria*, or parts under the short Ribs. See cap. 6. sect. 17. § 10.

V. Of the Membrane called *Pleura*.

§ 1. *Χιτών, ὑμῶν, καὶ ὑπὸν*, absolute, *Pleura*, *Tunica Costalis*, the inner covering of the Ribs, is a Membrane white, thin, hard, and resembling the *Peritoneum*, but according to *Spigelius* (in his *Anat. lib. 9. cap. 3.*) thicker and stronger than it. § 2. It arises from the *Tunics* which cover the *Intercostal Nerves* proceeding from the Back-Bone, by means of which it is continued with the Coats of the Brain ; and therefore it is thicker in the Back, to whose *Vertebra*, it cleaves as it were inseparably. § 3. It is every where double, that the Vessels may be carried within the foldings thereof : the inner part looking towards the Lungs and inwards, is thickest, smoothest, and as it were bedewed with a watery humor

humor, that it should not hurt the Lungs by any roughness : the outer part is thinner, and rougher; that it might cleave the more firmly to the Ribs: between these the matter of the Pleurisy is many times collected, and not only between the *Pleura* and Muscles. § 4. *As to its figure, it is arched without, hollow within* : above it is narrower, below broader, principally towards the sides. § 5. *From it arises some nervous Fibres*, by which the Lungs are tyed to it : if these be too straight, the motion of the Lungs is hindered, which causes an incurable difficulty of breathing. § 6. *It is perforated with many holes*, above in five places, to give way to the *Vena Cava*, the *Aorta* ascending, the *Oesophagus*, the *Wind-pipe*, and the Nerves from the *Par Vagum*. Below it is perforate in three places, to give way to the *Vena Cava*, the *Aorta* descending, and the Gullet. § 7. *It has on each side 12 Veins from the Vena sine pari, and the upper Intercoastal Vein* : of which the ten lower spring from the *Vena sine pari*. § 8. *It has on each side twelve Arteries*, of which the four uppermost spring from the superior intercoastal ; and the eight inferior from the hinder part of the *Aorta* descending. § 9. *It has in like manner twelve Nerves* ; of which the four branches which spring from the *Vertebrae* of the Breast, are bestowed upon the fore-part ; but the hindermost branches, upon the Muscles which are placed upon the Back : now here is to be noted, that all these Vessels are placed

between the duplications of the *Pleura*. § 10. *Its uses are*, 1. To cover the whole Cavity of the *Thorax*, and render it smooth, that the Lungs might not be hurt. 2. To wrap in all the Vital parts, and to defend them from all external injuries.

VI. *Of the Mediastinum, or middle Membrane of the Thorax.*

§ 1. *The Mediastinum is a Membrane standing in the middle of the Breast*, dividing the right side from the left. § 2. *It arises from the Pleura, being a double Membrane* ; for after that the *Pleura* having taken its original about the back, has ascended by the sides to the *Sternum* taking its course again towards the Back-bone, it is carried right out from the middle of the Breast to the Back. Being fastned on each hand to the sides of the *Sternum*, this Membrane is not obscurely doubled as is the *Pleura* ; but visibly, being not only double, but constituted of the duplication of the *Pleura* also : They are united according to the Longitude of the *Vertebra* of the Back, but seemingly severed towards the *Sternum*, not really so. § 3. *If in the Cavity between these parts of the Mediastinum, one be deeply wounded*, (but so as the Heart be not hurt) it may be without any great danger of Death, although such as are unlearned in Anatomy pronounce them deadly. Such a wound, if it be void of Peril you may easily discern, by the small quantity of Blood issuing out ; and by the Breaths not coming forth. § 4. *Its substance is membranous, yet thinner and softer*

softer than the Pleura : its exterior part is rougher, because of the fibres by which it is knit to the Pleura : but its inner side towards the Lungs is smooth ; and about the Vessels it is commonly full of Fat like the Caul. § 5. As to its magnitude, it reaches from the Throat to the Diaphragma. § 6. It has Veins and Arteries from the Mammarie (but small) as also from the Azygos or vena sine pari : and one proper Vein called Mediastina, (which is sometimes one and large, sometimes double and small) springing from the lower part of the Ramus Subclavius. § 7. It has Nerves (which run through its duplication) from the Phrenick and Stomatick branches. § 8. The uses of the Mediastinum are, first, to divide the Thorax into two parts, that the Breast and Lungs being hurt or wounded on one side, the other might be safe. Secondly, To hold up the Pericardium firmly, wherein the Heart is contained that it should not rest upon the Back-bone, when we lye upon our Back ; Or, that it should fall upon the Breast-bone, when we bend our selves towards the Ground ; nor touch the Ribs, when we lye upon our sides. Thirdly, to give a safe passage to the Vessels, which run through it ; as also to sustain the Midriff least it should by the weight of the Bowels be drawn too much downwards.

VII. Of the Thymus, or Kernel in the Throat.

§ 1. The Thymus grows to the Mediastinum in the Jugulum or

Throat-pit the highest part of the Thorax, having its name from the leaf of the herb Time, which it resembles. § 2. In the Embryo in the Womb, and in Children, the Thymus is greater, and more numerous : in persons of ripe years who are soon Angery, it is found dried and contracted. § 3. Its substance is glandulous, soft, spongy, and white ; and is distinguished in new-born Children, into a threefold Glandule, sufficiently big : in grown persons it is extenuated, its moisture being consumed by heat. § 4. Its use is to hold up the Cava and Aorta which ascend that way, and to sustain their branches, passing along to the Shoulder-Blades and Arms : to defend these Vessels, that they may not be hurt by touching upon the Bones : And lastly, that it might be as a cover and fence for the Heart : for it has been seen as a Bulwark to the Heart, which the Heart of a Child in the Womb stands in need of, because as yet it has no motion.

VIII. Of the Pericardium, or Membrane encompassing the whole Heart.

§ 1. The Pericardium or Cystis of the Heart, is a Membrane encompassing the whole Heart, whose Pyramidal figure it hath. § 2. It is so far distant from the Heart, as is sufficient to give way for the motion of the same, and to contain the waterish humor. § 3. It has two Membranes, one exterior from the Mediastinum, tyed before and behind to the Pleura and is fibrous : and one interior, from the external Tunics of the Vessels of the Heart ; for within the

the *Pericardium*, the Vessels want their common Tunicle it having been spent upon the *Pericardium*. § 4. *The original therefore of the Pericardium is at the Basis from the Tunioles which compass the Vessels of the Heart, which proceed from the Pleura.* § 5. *It leaneth more to the left side than to the right: and more to the fore, than to the back part of the Body.* § 6. *It is connected circularly to the Mediastinum, and the neighboring parts, with many Fibres; but especially to the nervous Circle of the Diaphragma, to which it cleaves so exceeding fast, that it cannot be separated from it, without rending; where-by the motion of the Heart is directed.* § 7. *It is perforated in five places in two, for the entering in, and going out of the Vena Cava; in three for the Vena pulmonalis and Arteria pulmonalis; and the passing out of the Aorta.* § 8. *Its substance is thick and hard: and so much harder than the Lungs, as it is softer than a Bone: its external surface is fibrous: its internal slippery, and both void of Fat.* § 9. *It has small Veins, below from the Phrenicæ; above from the Axillary: It has no perceptible Arteries, because it is so near the Heart, but doubtless it has some, though hard to be discerned: It has also small Nerves from the left recurrent, and the little twigs of the Septum.* § 10. *Within this Pericardium (besides the Heart) is contained a fetous or watery humor, transparently clear, and in some like water wherein flesh has been wast: in tast it is neither sharp, salt,*

nor acid. It proceeds out of the Vessels of the Heart, being a watery part of the Blood, a Lympha, and other juyces, which go to their proper receptacles. Of this opinion was *Nicholas Massa*; and *Hofman* differs not much therefrom. § 11. *The use of this juyce is to cool and moisten the Heart, & to make it slippery, thereby to facilitate its motion.* Also, that the Heart by swimming therein may be less ponderous, and not strike against any part. § 12. *Those who have this humor consumed have their Hearts dry, and as it were roasted: if it be in too great a quantity, it causes a palpitation of the Heart, and suffocation, and Death follows therefrom: If it be quite consumed, a Consumption of the Body happens. But that it may be bred anew when it is spent, is clearly seen in those whose Pericardium being wounded, the said humor has run out: and such a Cure was once performed by the exquisite *Veslingus*.* § 14. *The use of the Pericardium is first, to keep the Heart in its own place, whether we bend our Body forwards, backwards, or to either side: to be as it were a Tabernacle for the Heart, that in its motion, it might not strike against the hard parts of the Body. Secondly, To defend the Heart (as Armour) from all external injuries. Thirdly, To contain the aforelaid fetous humor.* § 15. *In the Cavity of the Thorax, there is also a blood water, or an humor resembling Blood and water mingled together. Its use is to moisten and temper the Superfices of the Thorax and Lungs.*

ings, that they may not be
ever heated nor ever dried.
ence water and Blood flowed
out of the side of our Saviour
being pierced.

IX. Of the Heart in general.

§ 1. *Kardia*, Cor, The Heart,
from *καρδία*, for that it is so-
fled with continual motion, also
from *αὐρῶν* (from running be-
cause of its said motion) is the
Mountain of Life, and the Work-
house of the Blood and Vital Spi-
rits, which is included in the Peri-
cardium aforementioned. § 2.
The Heart is but one in number:
yet Galen relates the Story of a
Man which had two Hearts:
and Theophrastus writes, That in
Cephala Partridges have com-
monly two. On the contrary,
Plinius, gives us Examples of
such as have had no Hearts:
Gellius also lib. 16. cap. 15. sig-
nifies the same. *Pliny* saith, The
Entrails were twice found with-
out any Heart when *Julius Cæsar*
sacrificed, and *Julius Obsequens*
observed the same. But as to
this, *Spigelius* suspects that the
Heart was hid among the Bow-
els and unfound, rather than
wanting: *Bartholinus* thinks that
those Hearts of the Sacrifices
might be stole away by the De-
vil. § 3. It is situate in the mid-
dle of the Body (the Legs and Arms
being excepted) and in the middle
of the Thorax likewise, where it
is on all sides compassed with
the Lungs. Now the Heart is
said to be placed exactly in the
middle, chiefly in respect of its
Basis, that Blood and Spirits
might the more conveniently be
distributed to the whole Body;

this Basis or head of the Heart
is round and broad. But the of-
the Heart called *Mucro* or *Apex*,
inclines towards the left side, and
its motion may be felt under the
left nipple that it might give way
to the *Diaphragma*: it could not
decline to the right hand, because
of the ascending of the Cava
there through the middle of the
Thorax. *Massa* saith, if the Basis
of the heart inclines to the left
side that such are left handed;
if the Heart be exactly in the
middle, they use both hands a-
like. § 4. The motion of the Heart
is chiefly discernable on the left side,
first, because that in its left Ven-
tricle the vital Spirit is contained,
and from thence arises the *Aorta*:
Secondly, because the point of the
Heart inclines to the left as a-
foresaid. § 5. As to the magni-
tude of the Heart, it is greater in
Man than in Beasts, the Proportion
being considered, so also the Brain
and Liver. It is for the most part
six inches in length, and four in
breadth: Otherwise it somewhat
differs, for persons cold of Com-
plexion and Fearful have the
greater Hearts: such as are hot
of Constitution and Courageous,
have the lesser Hearts. § 6. Its
figure is, Pyramidal, or something
resembling a Pine-Apple: Conick
saith *Bartholine*, because it ends
in a Point. Its upper part by
reason of the full Vessels is
broad, and somewhat roundish,
and is called the *Radix*, Basis, and
Head of the Heart. Its lower
part being sharper is called *Co-
nus*, *Mucro*, *Vertex*, *Cuspis*, *Apex*,
Finis, and *Cauda Cordis*: On the
foreside, it is more bossie: on
the

the hinder part more flat. § 7. *It is connected above to the Mediastinum; below to the Diaphragma by means of the Pericardium: but to other parts by its Vessels proceeding from its Basis, the lower part being free, and hanging loose, for its motion sake.* § 8. *Its substance, is fleshy, a red, solid, thick, and compact Parenchyma, invested with a proper Tunicle, furnished with Fibres of all sorts, and like a Muscle is continually moved.* And such a substance as this, it was needful for the Heart to be made of, first, that it might endure a perpetual motion: secondly, that it might have strength to drive forcibly the Blood, to the most remote parts of the Body: Thirdly, that the subtil Spirits contained in the movable Blood, with the inbred heat might not exhale or vanish: this substance of the Heart is thicker on the left side than on the right, because the right side sends only the Venal Blood to the Lungs; the left side requires a greater strength, to carry on a stronger motion, whereby the Blood may be driven out of the left Ventricle to supply the necessities of the whole Body. § 9. *The Tunicle of the Heart is scarcely separable, because it grows firmly to the substance, in respect of the matter not of the efficient Cause.* § 10. *The Fat of the Heart is about the Basis, seldom about the Conick point: it is more copious in Man than in Beasts, chiefly where the Vessels pass out: But I have seen the Heart of a Man wholly covered with Fat; the same was*

reported of the Heart of *Geor Duke of Albemarle.* This Fat not *Pimela, Pinguedo, or Auxilia.* Grease: but *Stear, Adeps Suet or Tallow.* The use of the Fat is to keep the Heart moist that it might not be dried by its continual motion. § 11. *For Vessels the Heart has the Vein called Coronaria, because in Figure it is like to the Crowns of the Antient Kings, & also it enriches the Heart.* It arises from the Ascending trunk of the *Carotid* (sometimes single, sometimes double) without the right Ventricle, about whose Basis, it spreads it self largely from the right earlet, and with a wide Channel, it compasses about the left earlet, (not entering of it, but) turning aside into the *Parenchyma* of the Heart, to whose whole substance, even to the point of it, it sends branches: In the right side there are fewer and lesser branches: but in the left side there are greater store and larger, because the flesh is there thicker. It has a small Valve in its original which gives entrance to the Blood into the right Ventricle, but suffers it not to go out. Hence the use of this Coronary Vein is to bring back the Blood: of the other Veins, (when it returns from nourishing the Heart,) into the right Ventricle again, the which even the situation of the Valves does signify. § 12. *It has also two Coronary Arteries, springing from the beginning of the Aorta, before it passes through the Pericardium; they are furnished with a Valve, which hinders the regurgitation*

ation of the Blood. Through these (because they are moved and pulse) Blood is carried to nourish the Heart and its Eare-lets; and here, saith Harvey, is made a peculiar kind of Circulation, out of the left Ventricle into the Arteries, out of them into the Coronary Veins, out of which it slides into the right Ventricle, through which it goes into the Lungs, and so again into the left Ventricle: These Arteries compass the Basis of the Heart, and send sprigs to the whole Heart, but chiefly to the left side. § 13. *It has Nerves* (so (but obscure ones) from the Pericardium, which are inserted into three places: One into the Heart itself: another into the Eare-lets: The third is distributed among its greater Vessels, to cause Sense, (not motion) according to Piccolbominaeus; because the Nerve being cut asunder, the Heart moves notwithstanding. § 14. *The external superficies of the Heart is smooth; but within, it is unequal, and has many Fibres.* § 15. *The Temperament of the Heart is in respect of five qualities hot; in respect of five qualities moist.* It is hotter than the hottest part of the body, and moister than the Skin, but dryer than a Muscle. If the heart is hotter than ordinary, the Breast is rough and Hairy, also the parts near the Hypochondria, such men are angry and bold. If the Heart it self be hairy, as Pliny, Valerius Maximus, Rhodignius, Benevenias, and Lucutius Lusitanus report, these men are extrem hot and crafty,

for the most part wicked, and audacious in the highest degree.

§ 16. *The use of the Heart (according to Harvey and Backius) is to be the Instrument of the Soul, to force the Venal Blood received from the Earlets into the Arteries, by which it dispenses nourishment to the whole Body.*

§ 17. *The primary action of the Heart (according to Bartholine) is, first, to be the Fountain of heat, in respect both of its substance, and of the Blood contained in it: And unless all the Blood did pass through the Heart, the other parts would never grow hot; for the further the Blood goes from the Heart; by so much the colder it grows, and the slower in its motion.*

This heat of the Heart and Blood proceeds from an inbred principle of heat, which is continued and preserved by the motion of the Heart. § 18. *Secondly, both to make and perfect the Blood. It makes Arterial*

Blood, as the passage of the Chylus through the Thoracical Lacteals to the Heart does demonstrate; and it perfects the Venal which is cooled and imperfect by reason of its long passage through the Veins: being sent from the Liver, by the Vena Cava into the Heart.

Now the Heart perfects two sorts of Blood, viz. that of the Veins, and that of the Liver: the Venal Blood is two-fold, one of the Descendent Trunk of the Cava, and the other of the Ascendent Trunk of the same. That of the Liver is also two-fold, the one of the *Vena Porta*; the other a Cruder sort lately made of Chylus (as in cap. 12. we shall

de-

demonstrate.) Now the Heart receives the Liver Blood through the *Cava*, to which another joyns its self out of the upper and lower Trunk, which remaining over and above, after the parts are nourished, by its long Journey, is made more cool and sluggish, and so need amendment again. That the Heart thus perfects the Blood is plainly apparent; for that the Blood coming out of the left Ventricle, has not wholly the same consistence, nor color, which that has, that just enters the right Ventricle; for as much as the former has a greater plenty of Heat and Spirits, than the latter: vital Spirits being added by the inbred faculty of the Heart. § 19. Hence it appears, that since the Blood circulates through the Lungs the Lungs are nourished by the Blood of the right Ventricle: but the left Ventricle does perfect the Blood flowing from the Lungs, that it might be made fit for nourishment of the whole Body, being conveyed through the Arteries, unto the utmost parts of the Body. However the right Ventricle perfects and fits the Blood (in a certain measure) for the Lungs. § 20. The time which the Heart takes up in perfecting of the Blood is but a moment: for first, it is immediately received and expelled, without making any stay there: secondly, if it should make any stay there, the Blood would not be made better but become adust, moreover by reason of the continual afflux thereof, the Heart would be suffocated, and the natural and vital heat extingui-

ed: thirdly, because it receives its Spirits and amendment like a Candle, which in the twinkling of an Eye is lighted by the flame of another Candle. § 21. A short Action of the Heart is perpetual to move, which is first in order, to preserve the Blood, and the whole Body from putrefaction: Secondly, to help the Elaboration and add to the heat of the Blood: Thirdly, To kindle and stir up the vital Spirits and flame: Fourthly, to cause a pulsation, whereby the Blood might be driven into the Arteries, to distribute nourishment into all parts of the Body. § 22. This motion of the Heart is called Pulsus, the Pulse or beating, which is continual without ceasing caused partly by the influence of Blood, and partly from the inbred faculties of the Heart. § 23. It consists in Systole, Diastole, and Peri-systole: all which we shall explicate from ocular inspection. § 24. Systole is the proper and natural motion of the Heart, whereby it contracts and draws it self into a narrower compass: that the Blood may by that means be forced out of the right Ventricle, through the Arteria Pulmonalis into the Lungs, and out of the left Ventricle, through the Aorta into the whole Body. § 25. Diastole is an accidental motion, by which the Heart is made wider, that it may draw or receive in fresh Blood through the Vena Cava into the right Ventricle; and through the Vena Pulmonalis into the left. § 26. Peri-systole is a certain rest between both motions, but it is so small in healthy persons that it cannot be discerned.

cerned : but it is very manifest such as are at the point of Death, and this is called the quiet and natural state of the Heart. Besides these motions two others are observed, *first*, an Undation, or waving towards one side : *secondly*, a Trembling: the former depends upon the situation of the right Ventricle; the latter is preternatural.

§ 27. *That in the Systole the Heart is contracted, and expulses the Blood; and in the Diastole it is dilated, and takes in Blood, is proved by the Sense of Seeing; first*, by Ligatures of the Cava, Aorta, Vena, and Arteria Pulmonalis, in Live Anatomies. *Secondly*, from the Vessels being wounded or opened : for the Aorta and Arteria Pulmonalis are seen at every Systole to pour forth plenty of Blood, so long as the Heart is vigorous : but at the opening of the Cava, or Vena Pulmonalis there is no such thing: *thirdly*, from the flagging and swelling of the Heart, which is evident and visible to the external Sense : for the Heart being contracted in the Systole, something must be squeezed out, as it were by force : so of necessity when it is widened in the Diastole, something must needs be received in : *Fourthly*, because the Ventricles in the Systole not only appear, but are felt lesser ; but in the Diastole greater. § 28.

What quantity of Blood is squeezed forth in every Systole, or received in, in every Diastole is hard to be determined : Several Authors have made their observations about it, but they all differ, first, in the number of Pulsations :

secondly, in the quantity of Blood expelled at every Pulse : These we think cannot be exactly measured, because they may both vary, according to the differing state of the Heart, considered in Age, Sex, Temperament, Exercise, Course of Living, &c. Bartholine saith, The whole quantity of Blood contained in the Body, seldom exceeds 24 pounds, or is less than 15 pounds : from whence, if the number of Pulsations in a time proposed, and the quantity expelled at each Pulsation can be Learned ; by guessing at the total quantity, the time in which the Circulation of the Blood is absolved, may nearly be found out. § 29. Harvey supposes that the Heart sends forth in every Systole Ziv. or Ziij. or Zj. Conringius is of the same Mind : Walæus admits of Ziv. but supposes only Zj. Slegelius doth the same. Regius has many times observed Ziv. sometimes Ziij. and sometimes but Zij. in the Heart of a Dog dissected : Hogeland supposes only Zss. Bartholine but Zis. and truly I am of opinion he is not very wide of the mark. § 30.

As to the number of Pulsations, Primrose numbred in one hour 700. Harvey and Riolanus 2000. Walæus and Regius 3000. the Author hereof 3600. Cardan 4000. Bartholine 4400. Plempius 4450. Slegelius 4876. Some 6000. others 8000. so many Systoles, & so many Diastoles will be in an hour, as long as the Heart is strong ; but if it once languishes, it has more Diastoles than Systoles. § 31. From these considerations it appears, how much

much Blood may be emitted out of the Heart in an hour, by its sundry Pulsations: the which we have calculated in this following Table to half Scruples, Scruples, a Dram, two Drams, and half an Ounce. So that supposing all the Blood in a mans Body to be about 18 pounds: that ordinari-

ly there are 3600 Pulsations one hour: and that at every Pulsation the Heart emits one Ounce of Blood: it will be manifest that the Circulation of the Blood will be absolved in about 3 hours space, the which thing may be very probable.

pulsa- tions.	half scrupls. lb. ʒ. ʒ.	Scruple. lb. ʒ. ʒ.	Drachm. lb. ʒ. ʒ.	2 Drams. lb. ʒ. ʒ.	half ounce. lb. ʒ. ʒ.
700	1 2 2	2 4 4	7 1 4	14 3 0	28 6 0
2000	3 5 5	6 11 3	20 10 0	41 8 0	83 4 0
3000	5 2 4	10 5 0	31 3 0	62 6 0	125 0 0
3600	6 2 6	12 5 4	37 4 4	74 9 0	149 6 0
4000	6 11 2	13 10 5	41 8 0	83 4 0	166 8 0
4400	7 7 5	15 3 3	45 10 0	91 8 0	183 4 0
4450	7 8 5	15 5 3	46 4 1	92 8 2	185 4 4
4876	7 9 0	15 6 0	46 6 0	93 0 0	186 0 0
6000	10 5 0	20 10 3	62 6 0	125 0 0	250 0 0
8000	13 11 5	27 11 3	83 10 1	167 8 2	335 4 4

§ 32. *The efficient Cause of the motion of the Heart now remains to be enquired into: and this is either near or remote. § 33. The near, proximate or immediate cause is 2-fold, viz. both from the Blood and the inbred pulsifick faculty. § 34. The Blood causes it, by its perpetual falling into the Heart through the Vena Cava and Pulmonalis, where becoming more Vital, it raises the Heart into a Tumor, like Water in a Bladder: and because of the plenty of Blood, it lifts it self up to expel the same, by gathering together its Fibres; which motion resembles the motion of other parts, as the Stomach, Guts, Bladder, Womb, which are distended by the reception of Chyle, Whey, Wine, Blood, &c. and*

being expelled they fall again: this is proved by experience for if the Vessels bringing Blood into the Heart be tyed and stopp'd, the motion of the Heart ceases, and nothing but a waving and palpitation remains: but if the Ligature be loosned, it reconverts its motion again. § 35. The inbred pulsifick faculty is joyned with the Blood as a cause also of the Heart's motion, that it may direct the influx and egress of the Blood, and assist the same, which otherwise would be irregular: for if the Pulse was not guided by some inbred faculty, it would be always unequal, never equal: And this is partly evident; for if the Heart (being taken out of the Body) be cut in pieces, or lightly pressed

with a Pin, not only the whole Heart, but the peices also, will presently Pulse, by reason of the reliques of this inbred faculty, or inherent Spirit remaining. § 36. Hence it appears that the motion of the Heart is natural and perpetual; for it moves against our Wills, and when we are asleep; so not Animal: but we exclude not the Spirits, for that they are the Servants and Instruments of the Soul. § 37. The remote causes of the motion of the Heart are, 1. the vital Spirit, as well that which is inbred in the Heart, as that which comes thither from without: these in the Diastole of the left Ventricle kindle and excite the Vital Flame by the Systole from the Lungs. 2. the Figure and Conformation of the Heart and its Vessels, being exquisitely designed to receive & exclude the Blood; chiefly the Fibres of the Heart and fleshy Columns, which make for so much for the strength of the Heart alone, as for its motion: for all the Fibres (greater and lesser) being contracted in the Walls and Septum, (which according to Harvey are Circular, as in an Artificial Net squeezed) the Blood is expelled. Thirdly, the expulsion or going forth of the Blood, continually falling in: for Blood perpetually forcing in, thrusts and drives on the other Blood, by which the motion is not only in part made, but also made constant, and perpetual. Fourthly, the Attraction of the Heart and parts adjacent, so that they should want sufficient and profitable nutriment, to sustain or uphold them.

X. Of the Heart in special; viz. of its Earlets, Ventricles, Septum, Vessels, and Valves.

§ 1. The Earlets are externally to be seen, and are so called from their shape, because they are much like to the Dogs Ears; and also are fastned to each side of the Basis of the Heart, as Ears to the Head. They cleave to the Orifices of the Venal Vessels, whereby they are mediately joined to the Heart, being on each side one, answerable to the number of the Ventricles of the Heart. § 2. Their substance is thin and soft, for ease of Contraction, and nervous for strength sake: being a peculiar matter, like to which no other part is framed of: the left is the more hard, more fleshy, & the thicker, but the right Earlet is the larger. § 3. Their circumference is unequal both without and within: being full of Blood, their externally superficies seem smooth and bunching; being emptyed, they are wrinkled, but the left more than the right, because it has more turnings, windings and holes within it. § 4. The right Earlet is joynd to the Vena Cava, with which it seems to be one common Body: the left is joined to the Arteria Pulmonalis. § 5. Within they are lined with a fleshy Membrane, smooth, and stretched out to the extremities of the Treble pointed Valves, to which the Fibres of the Valves are fastned. Also about the whole Circumference fleshy Columns grow out, first great crooked ones, out of which spring many lesser ones. with an admirable and exquisite con-

C c c c texture

texture, sometimes single, sometimes wreathed and infolded either with the great ones or one with another. Between these Columns deep pits are found more in the left, fewer in the right. § 6. *Their color in Infants is red : in grown persons they are blackish blew or purple ; but in their motion they change their color ; for in their Systole they are pale, because they expulſie the Blood : but in their Diastole they grow rediſh again.* § 7. *Their motion is contrary to that of the Heart, for when the Heart is dilated they are contracted to exclude the Blood ; and contrariſe : this motion is manifeſt to Senſe in live Anatomies becauſe of the Blood ruſhing in and filling them ; and their contracting of themſelves by means of their fleſhy Fibres.* § 8. *They have alſo in their motion (like as the Heart) a Systole, Diaſtole, and Periaſtole : The Systole is cauſed by their contracting themſelves, to expel the Blood into the Ventricles : The Diaſtole is cauſed, by their receiving Blood from the Vena Cava, and Vena Pulmonalis ; and in both Earlets, the Systole and Diaſtole, happen at one and the ſame time: the Periaſtole cannot be diſcerned but in perſons ready to dye.* § 9. *Their uſe is, firſt, to be as primary receptacles and ſtore houſes to the Heart, that the Blood might not ruſh in all at once, leſt the motion of the Heart ſhould be hurt, and the ſpirits ſuffocated : hence it is that they are placed at the Veſſels which ſend Blood into the Heart, not at the Arteries which ſend it*

forth. Secondly, to be a ſafe-guard to the Veſſels to which they are joyned, that they ſhould not burſt or be broken. § 10. *The Ventricles or Cavities of the Heart are in number two, the right and the left, whoſe inner ſurface is uneven and rough, chiefly the left: in theſe Ventricles many holes or pits are found, made by fleſhy Fibres ; in the right more, but narrower ; in the left fewer, but deeper.* § 11. *Theſe Pits are conſtituted by thoſe fleſhy Fibres or Columnæ Carneæ, which ſpring from the Mucro of the Ventricles, and becoming membranous, are inserted into the lower parts of the Valves.* § 12. *Theſe Columnæ are ſometimes round ſometimes thin, being five (ſometimes more) in the right Ventricle ; and but two viſible in the left, which are more thick and ſolid.* § 13. *Their uſe is, to be as Ligaments to the Heart: Benediſtus ſaith, they ſerve to hinder the Blood from going into Clotters. Slegelius ſaith, they are made to be contracted, that they may ſhut the Oriſices of the Cava and Arteris Pulmonalis. Veſalius ſaith, they do farther (by being contracted) the Diaſtole of the Heart. Harvey ſaith, they draw the Cone or Point of the Heart, to its Baſis, by their oblique Fibres. Pariſianus ſaith, they help the Heart to contract it ſelf. Riolanus calls them Columnæ Carneæ, fleſhy Pillars, which are made as it were to ſuſtain the Heart ; from which opinion Maſſæ, very little differs, who calls them little Muſcles. Baſkins ſaith, they ſerve inſtead of Ropes,*

Ropes and Bands in the contractions of the Heart, lest the Valves should be forced beyond their pitch, and so not be able to retain the Blood. *Walaw* saith, they assist the contractions or *Systole* of the Heart, especially when it is strong and violent. § 14. The right Ventricle, has its Blood from the Vena Cava, which Vein it receives into its self; hence its Blood is said to be Venal; it is much bigger than the left, for it reaches from the Basis to the Mucro: it is not round but Semi-circular, resembling the horned Moon: and seems to be only as it were an Appendix to the side of the left Ventricle, yet is both deeper and larger than the left, because of the store of Blood which it was to contain, both to nourish the Lungs, and to make vital Spirits in the left Ventricle. § 15. Its use is to contain the Venal Blood; to con-
 duct and attenuate it; and so to send the thicker and greater part through the Arteria Pulmonalis into the Lungs to nourish them: and the pure subtil part through the Septum into the left Ventricle, to joyn with the thicker part sent through the Lungs, to make vital Spirits and Arterial Blood, for the nutriment of the whole Body. Hence it is, that Fishes which have no Lungs, and draw in air in at their Mouths, are without this Ventricle, having no more but one. § 16. The left Ventricle is the more narrow, but the more noble, as containing the Arterial Blood: in Figure orbicular, and reaching to the point of the Heart. It is placed in the middle

of the Heart: and its flesh or wall is of a more solid and compact substance, being three-times as thick as that of the right Ventricle; that the Vital Spirits might not exhale, and that its motion might be the stronger, being to force the Blood into the farthest parts of Body. § 17. The use of this Ventricle is to make (and be a store-house of) vital Spirits and Arterial Blood. These Spirits and Blood are prepared of a two-fold matter: first, of Blood prepared in the right Ventricle, and then passed through the Septum and the Lungs: Secondly, of Air drawn in by the Mouth and Nostrils; which being prepared in the Lungs, is transmitted through the Vena Pulmonalis with the Blood into the left Ventricle, to kindle, Ventilate and nourish the Vital flame. § 18. Hence the uses of both the Ventricles together are, to perfect the Venal Blood, and to generate the Arterial: to receive the Venal running back from all parts of the Body, through the Veins; and to perfect and expel it again through the Arteries, into the most remote parts: but herein they differ; the Coction of the right is not so perfect as the Coction of the left; and whereas the right prepares only for the Lungs; the left Ventricle prepares Blood for the whole Body. § 19. The SEPTUM, or partition wall of the Heart is that which divides the two Ventricles asunder; it is thick like the other Wall of the left Ventricle, hollow on

the side of the left Ventricle, but convex or bunching on the contrary side; it is filled with many Pores through which (though to us they seem not perceivable) the more subtil and spirituous part of the Blood of the right Ventricle does pass. These passages are much like to those of the Skin, through which Sweat comes: Or, those of the Kernels and Spermatick Vessels, through which the Seed breaks into the Urethra: Or, those of the Lungs, by which the Blood passes out of the *Arteria Pulmonalis*, through the substance of the Lungs, into the *Vena Pulmonalis*: Or those of the Liver, by which the Blood passes out of the branches of the *Portæ* into the *Cava*. *Celsus* speaks extremely well, when he said, *That nothing is more foolish than to think that what and how it is in a living man, that so it must needs be in one that is dead, or dying.* These Pores are crooked and winding, that the Spirits and subtil Blood, might be the better elaborated in their passage through them; but in the Heart of an Ox, long boyled, they become conspicuous, as *Bauhinus*, *Riolanus*, and *Bartholinus* have observed. § 20. Its use is to divide the Ventricles, that the Venal Blood, may be kept from the Arterial: and also to better elaborate the Spirits and subtil part of the Venal Blood, in its passage, Sweating through those crooked Meanders of the *Septum*; this passage is made the more easie by reason of the motion of the *Septum*, which is partly common

with the Heart, and partly proper to its self. § 21. The Vessels of the Heart are in number four, going out of the Heart, which *Hippocrates* calls the Fountains of humane Nature; of which two, viz. the *Vena Cava*, and *Arteria Pulmonalis* are found in the right Ventricle: the other two, viz. the *Vena pulmonalis*, and *Arteria magna*, are found in the left: Within all which are placed eleven Valves, made out of the Tunicles of their Vessels, widened and stretched out. § 22. The *Cava* has three treble pointed Valves, called *Tricuspides*, looking from without inwards: The *Aorta* has three Valves, *sigma* shaped, looking from within outwards: The *Arteria Pulmonalis* has within it three *sigma* shaped Valves also, which look from within outwards. Lastly, the *Vena Pulmonalis* has two Miter like Valves, resembling a Bishops Miter, which look from without inwards. § 23. The *Vena Cava* is inserted into the right Ventricle, with a very large Orifice, (three times bigger than the Mouth of the *Aorta*, from which reason the Antients thought it arose from the Heart not from the Liver) is near its insertion, furnished with fleshy Fibres; It has a membranous Circle growing to the Orifice thereof, to strengthen the Heart, which is presently divided into three strong membranous and treble pointed Valves called *Tricuspides*, because they are like the triangular heads of Darts, when they are shut and fall close together. They look from without inwards

wards, that the Blood may enter into the Heart but not return back. They are joyned (as the rest of the *Valves* are) by many Threads to the *Columnæ Carneæ*, (which some call the Ligaments of the Heart.) The use of the *Cava* is, to bring in Blood from the Liver and the whole Body, by its ascending and descending Trunks. § 24. The *Aorta* or *Arteria Magna*, so call'd because it is the *Radix* of all other Arteries, arises from the left Ventricle of the Heart, within which, three *Valves* are placed, called *Sigmoides* or *Sigma* shaped, looking from within outwards, that the Blood passing by them out of the left Ventricle, might not return again. The use of the *Aorta* is to distribute Vital Spirits and Arterial Blood from the Heart universally into all parts of the Body. Of the other two Vessels we shall speak immediately in the two following Sections.

XI. Of the Vena Pulmonalis called by some Arteria Venosa.

§ 1. The *Vena Pulmonalis* is implanted into the left Ventricle of the Heart with a round and great Orifice, (greater than that of the *Aorta* : just before its insertion, it is divided into two parts, (whereby it seems as if it had a two-fold Mouth ;) by which it is disseminated into the right and left parts of the Lungs by the left side of the Wind-Pipe, where they end in small Threads. § 2. It has but one only *Tunic*, of the same substance with a *Vein*, and conveys the Blood of the *Pulmonick Artery* into the left Ventricle of the Heart. § 3.

In its dilatation it draws Air to the Heart, which Air is mixed with the *pulmonick Blood*, for the Generation of Spirits and Arterial Blood ; and to kindle and nourish the Vital flame. § 4. Its *Tunic* is but single and thin, partly that the fuliginous Vapours might be the more easily discharg'd, & partly because the Blood might be cooled, and receive Air by the *Bronchia* of the Lungs. § 5. It has two *Miter-like Valves*, called *Mitrales*, which look from without inwards, that thereby they might let in the Blood (coming from the *Arteria Pulmonalis*) into the left Ventricle of the Heart, and hinder its regurgitating. § 6. These *Valves* are greater than those of the *Cava*, and have longer Filaments or Threads (each having seven large ones, besides little ones annexed to them) with many fleshy implantations for strength sake. § 7. Its greater branches accompany the greater branches of the *Arteria Pulmonalis*, so that the *pulmonick Veins* and *Arteries* march together : at last they are joyned by many *Inosculationes* or *Anastomoses* : Between those, the branches of the *Arteria* go along : these Vessels are great, because the Lungs by reason of their perpetual motion require much nourishment and cooling. § 8. Hence it appears that the Blood (carried into the Lungs by the *Arteria Pulmonalis*) goes into the *Vena Pulmonalis* by sundry *Anastomoses*, and so into the left Ventricle of the Heart, where being filled with Vital Spirits, it is sent by the *Aorta* into the whole Body, to impart thereto Life

and nourishment. § 9. *Lastly this one thing is to be noted,* 1. That the Blood is cooled by staying in the Lungs while it is in passing. 2. By touching the *Bronchia* cooled by the attraction of fresh air. 3. By the continual motion of the Lungs, thereby as it were fanning it: for no Air in its simple substance is carried to the Heart; for the Blood contained in the *Arteria* and *Vena Pulmonalis* is sufficiently cooled by the *Bronchia* passing between them.

XII. *Of the Arteria Pulmonalis, called also Vena Arteriosa.*

§ 1. *Arteria Pulmonalis (false) called by the Ancients Vena Arteriosa* is constituted of a double Coat, with Pulsation, and arises out of the right Ventricle of the Heart, with one Orifice, after which it is immediately divided into two branches, which enter the Lungs, and are disseminated through them both on the right and left sides by many small sprigs, till they become as it were Capillar. § 2. *It has three Valves, called Sigmoides, which look from within outwards,* lest the Blood having entered the same, should fall back again into the right Ventricle of the Heart. § 3. *This Artery as it arises from the upper part of the right Ventricle, so it is implanted into the substance of the Lungs, by the right-side of the Wind-Pipe.* § 4. *Its use is to convey the Blood out of the right Ventricle of the Heart into the Lungs, for their nourishment:* and what remains over and above for that use, to pass it to the *Vena Pulmonalis,*

and so into the left Ventricle of the Heart.

XIII. *Of the Lungs, or Lights.*

§ 1. *Πνεύμονες ἢ πνεύμονες, Pulmones, the Lungs, are so called a respirando, because they are the Instruments of Breathing, and are only given to Animals living in the Air, not to Fishes which have neither Neck or Voice.*

§ 2. *Their situation is in the Capacity of the Thorax, which they fill when they are distended by our drawing in breath.* § 3. *Their shape much resembles that of an Ox-hoofe: on the side next the hollowness of the Thorax, they are bossy or bunching out: on the inside where they compass the Heart, they are hollow.*

§ 4. *They are connected in the fore-part to the Sternum, by the Mediastinum; behind to the Vertebrae of the Back: Sometimes they grow at the sides to the Pleura, by certain fibrous Ligaments, whence comes a lasting shortness of Breath; but Riolanus says, he always found this adhesion: Bartholinus chiefly acknowledges it about the lower Ribs, near the Diaphragma, lest they should press and bear upon the Heart: lastly, they are joyned to the Heart by the Arteria and Vena Pulmonalis.* § 5. *They are compassed with a thin light Membrane, furnished with many Pores, sufficiently large when the Lungs are blown up with a pair of Bellows: those Pores Walaeus is laid to have observed in live Anatomies as big as a large Pease; by which ways it is thought, that the Sanies or purulent matter of the Thorax, might come away by Coughing.*

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This Membrane arises from the encompassing Pleura. § 6. Their colour in a Child in the Womb, is red like that of the Liver, because of the material Blood, with which it is nourished: in grown persons it is of a palish red, sometimes of a palish yellow, and sometimes ash-colored; in such as have dyed of a long sickness, blackish: but in that part where they are tyed to the Chest by Fibres, the colour is red, as in a Child in the Womb. § 7. They are divided into two parts, viz. that on the right, and that on the left side, by means of the Mediastinum, that one part being hurt, the other might do its office. § 8. Each of these parts are divided into 2 Lobes, Lappets, or Scoll ps, about the fourth Vertebrae of the Thorax, of which the higher is shorter than the lower: in Bruiis each part is commonly divided into three Lobes; but it is seldom so in a Man, unless it be preternatural; yet Hippocrates, Ruffus, Piccolboninus, Rolanus, and Bartholinus, have observed such. By these Lobes or Lappets, the Lungs embrace the Heart, as with so many Fingers. § 9. The substance of the Lungs have all along by the Ancients, been accounted a carneus or fleshy Parenchyma, like other Bowels: but later Authors have found them out to be truly membranous. The most excellent Malpighius, has lately found them to be altogether Excarneous and meerly membranous. The Bulk of the Lungs (saith he) if the Nerves and certain Vessels be separated, with the branches of the Trachea, are a certain heap

of little Bladders, and those small Bladders every where stretched out and fistulous, to obtain such position and joyning together: and an entrance lies open into them from the Aspera Arteria, and so from one into another, until at length they all end in the Membrane inclosing the Lungs. For let a Lung be taken out hot, and let Water so often cast by a Syringe into the pulmonack Artery, as till the whole frame appears somewhat white and almost transparent, the Blood being clean washed out: afterwards this water being squeezed out by pressing, and the Air let in by the Wind-pipe and stopp'd in; let the Lungs so filled be dried: and it will not only when expos'd to the Light, outwardly shew transparent little Bladders; but being inwardly cut, present a white heap of little Bladders to the Eye. Besides these, having viewed them by a Microscope, he discovered a certain wonderful and admirable Net, binding and knitting together every one of those little Bladders which Net consists of the infinitely small Productions and Ramifications of the Pulmonick Artery and Vein, which circulate the Blood through those small and crooked passages. § 10. This most exquisite man, besides these little Bladders, which chiefly constitute the substance of the Lungs, has found out that the Bulk of the Lungs is made up by almost infinite little Lobes, which are each inclosed within their proper Membrane, which Membrane is filled full with the common Vessels of the Lungs, and is every where knit to the

twigs of the *Trachea Arteria*. § 11. The situation and insertion of these little Lobes are manifold, as being sometimes joyned to the Bases of the *Aspera Arteria*, and sometimes to its Ribs, or to its Cone, according as they end in the outward parts of the Lungs, or in their corners or inward parts; and according to the conveniency of their position, as to their fit joyning, and constituting of certain interspaces; whereby the frame of the Lungs may be compleatly filled up. § 12. These Interspaces distinguish those said little Lobes (which do evidently appear in a larger Lung, or in any other half boyled:) nor are these inter-spaces bare empty Cavities, but have many Membranes spreading from the said little Lobes, some parallel, some with acute, some with obtuse angles, which are also filled or covered with many Vessels; so that these inter-spaces are certain membranous Vesicles, or Bladders transparent and most thin. § 13. If you gently open in one single Lobe, one of these interspaces with the point of a Pen-knife, and blow into it by a small hole through a Pipe: immediately that whole Lobe will be greatly distended, every interspace being blown up: being brought to the Light, these interspaces (being made transparent,) do sever by great intervals every Lobe, and make them very conspicuous: so that every rank of the Lobes will be shaped like a *Polypody* leaf, and like the same Figures which *Malpighius* has described. But when these little Lobes are filled

and extended by some Liquor (easily congealing) cast into the hollowness of the *Trachea*, the appearance thereof is divers, and appears in the form of Grapes or bunches of Grapes. § 14. The Vessels replenishing the Lungs are of five several kinds, viz. the *Bronchia* of the *Aspera Arteria*, the Veins, Arteries, *Lymphaducts*, and Nerves. The Veins and Arteries every where accompanying the Productions of the *Aspera Arteria*, extending themselves conjunctively through the whole substance of the Lungs, and in like branches. This (saith the Learned *Willis*) is plainly perceived by a pleasant sight, in a Lobe of the Lungs, being emptied and turgid, Quick-silver being cast into some of the Vessels, and others filled with a colored Liquor. The *Lymphaducts* are evident to the Eye, to be spread through the whole Lungs. The Nerves and their minute branches are also universally every where distributed through the whole substance. But besides these primary Veins and Arteries; there are secondary ones, viz. Sanguiferous Vessels springing from the *Cava* and *Aorta*, with Glandules and Fibres as well nervous as moving. § 15. From hence (saith *Willis*) we may infer, that the entire frame of the Lungs is purely fistulous, and compacted of Pipes of several kinds and magnitudes, and variously and most intricately disposed: which although they may appear wonderfully complicated, and many ways twisted and wreathed, are yet every where continued; and being

being stretched out with a mutual respect to one another, do hither and thither in good order, and regularly convey and dispose the Air, Venal Blood, Arterial Blood, *Lympha*, and Animal Spirits for accessory and necessary uses. § 16. Now although all the chief Vessels of the Lungs, by reason of their mutual offices, communicate among themselves; yet the *Pneumonic Veins* and *Arteries* attend on the *Trachea* and its branches, the most exactly: for the branches and sprigs of every one of these, springing a like from their respective stocks, and stretcht to and fro, go on every where with like pace: so that the *Trachea* and its branches are always in the middle, above which is the Vein, and beneath the *Pulmoniac Artery*, all which are carried and distributed with an equal and sociable branching: and the sprigs and branches sent from each of them, are presently applied to their like, and are interwoven like wonderful Nets, of which the Texture of the Lungs is almost totally constituted: whose spreading out and various complications among themselves, they all going together, as to the lesser sprigs and twigs, it will be impossible to describe. § 17. Yet (saith Willis) if you will cast into every Vessel apart, Quick-silver, hot and flowing Gypsum, Wax mingled and made liquid with Oyl of Turpentine, or some such matter, which will extend all their chief passages, and continue them stufe, then may you exactly enough represent

the Figure; and after that manner the frame and Texture of the whole Lung may be apprehended, each being described by it self, and apart. § 18. The description of the *Bronchia*. The *Bronchius* is the second and lower part of the *Trachea Arteria* or Wind-Pipe, beginning at the entrance of the Lungs. Near the fourth *Vertebra* of the *Thorax* that great Pipe (the *Trachea*) is divided into two Trunks, one whereof goes towards the right side of the Lungs, the other to the left: afterwards, both having entered the Lungs, and being subdivided for the greater Lobes, they distribute very many branches, and from them branches a multitude of lesser sprigs; to the lesser Lobes through the whole frame of the Lungs. § 19. The Coats of the *Bronchia* (as also of the *Larynx*) have muscular Fibres of both kinds, together with the Glandules; and the Net-like twisting of the Vessels, from whence it may be concluded, that all the lesser Pipes of the *Aspera Arteria* have their constant turns of *Systole* and *Diastole*, to wit, that they are all contracted while we breath out, and distended while we suck in Air. § 20. The Ramifications of the *Bronchia* on both sides, do not only constitute two (and sometimes more) greater Lobes: but as the famous *Malpighius* has observed, many lesser or little Lobes, distinct among themselves: for each *Ramification* sends forth to and fro, many little branches, every of which branches being joyned with like branches of the

the Pulmonick Vein and Artery, are from thence again divided into innumerable lesser twigs, all which are every where fellowed and complicated among themselves; and having annexed to them Nerves and peculiar *Lymphaducts*, ending in the outward superficies of the Lungs, they represent (as it were) a private Grove: and so the whole structure of the Lungs (consisting of many little *Ramifications* of the aforesaid Vessels) as so many several Groves: The branches whereof, and the exterior sides of which, although they may seem mutually to touch one another and cleave together, are yet disjoyned, and each bounded within its own peculiar Limits. § 21. *The use of the Bronchia, and the little Bladders or Cells thus formed, are to receive in and treasure up the Air, as also to prepare it; for that the external Air is sometimes too sharp, or otherwise disagreeable to the Blood and Spirits. And seeing that the Air ought only to enter the Lungs, to cast into the Blood, its cooling and nitrous particles, to excite its flame and vital Powers, (the Blood passing through the Lungs, for that very cause) it was necessary that the Lungs should be thus divided and formed first into greater Lobes: and those into many lesser and lesser, till they become infinitely small: and each of these to be furnished (according to all their parts) with a like Complication of every kind of Vessels, a like great and little, in every one of which*

the Blood being drawn out by minute portions, and as it were little rivulets, might thoroughly meet with the nitrous particles, receive a sufficient breath and cooling, and then return into its Fountain. § 22. *The description of the Pulmonick Artery. It arises from the right Ventricle of the Heart; and inclining towards the Aspera Arteria is divided into a right and left branch (as we have formerly declared) each of these branches divide themselves according to the division of the Trachea, and in parallel Lines do accompany (as aforesaid) the branches of the said Trachea every where, running underneath them: sliding first into the greater Lobes of Lungs; and then into all the lesser Lobes, till they arrive with the sprigs of the Trachea to the Circular little Cells or Bladders, where they are variously complicated, with the veins (as you may perceive by help of a Microscope) & so girt about those little Bladders, enwrapping them like Ivy, by means of their thick and net-like branchings. So that all the Blood-Vessels in the Lungs do dilligently wait upon those of the Air, and every where insinuate, and intimately mingle themselves with them. § 23. This Pulmonick Artery (as also the Trachea and Aorta) hath a muscular Tunicle, with two ranks of Fibres, viz. strait and circular: upon this Coat lye many Glandules with a net-like complication of Vessels. § 24. *The description of the Pulmonick Vein. This springing from the left Ventricle**

Ventricle of the Heart, is divided like the Artery, into two great branches; then into lesser branches, according to the greater & lesser Lobes of the Lungs and lastly into the least, where, being carried above the Wind-Pipe, it runs and answers directly to the Ramifications both of the Trachea, and Pulmonick Artery. § 25. *It may now be demanded how the Blood in the Arteries come to Pulse, and the Blood in the Veins not, since both of them are indued with contracting Muscular Fibres, and both are alike joyned to the Heart which continually Beats?* To which we Answer, first, that those musculous or moving Fibres are vastly more in the Arteries than in the Veins: Secondly, The Blood conveyed into the Arteries is blown, driven, or cast in by force, whilst the other runs of its own accord, and is actuated by its own waight, without any compulsion: Thirdly, it is caused from the inverted conformation of the Vessels: for the Blood running in the Arteries, goes still from wider to narrower spaces; and therefore requires a certain kind of force in its motion, that it may violently distend them; whereby, lifting up the sides of the Arteries, a pulsation is caused; because while that part of the Artery which is behind the Blood is contracted by its musculous Fibres, that part which is before it, must needs beat, being filled with the stream of Blood gushing in: Whereas on the contrary, the Venal Blood returning to the Heart, runs out of less

into greater spaces, which are more wide and capacious, and therefore runs along silently as it were, without any Sensible Pulsation. § 26. *The Description of the Lymphaducts.* These are the Vessels which carry clear water, of which vast numbers are dispersed through the Lungs, to attend upon the Veins and Arteries: Now all their Ramifications, tending from the Superficies of the Lungs, towards its original do unite into some greater Trunks, which being inserted into the *Aspera Arteria*, discharge thereinto the superfluous *Lympha*, drawn from the Blood and nervous juyce. These Lymphatick Vessels have their passage out of the Lungs, and press towards the passages of the *Thorax*, with their numerous branches, being for the most part mingled with them; but they climb upon the *Oesophagus* in their way, as also the Trunks of the *Trachea* and *Aorta*, and do loose many slips in them by a various insertion, whereby not only the superfluous *Lympha* may in part be discharged as aforesaid; but also, that some of the said *Lympha* may be bestowed, to make slippery the sides of those Vessels. These *Lymphaducts* of the Lungs are specially furnished with almost an infinite number of little *Valves*, placed very close one to another, least the *Lympha* (caused from the Sweating, steams and vapors of the Pulmonick Vessels, now condensed) should run back again into the Lungs. § 27. *These Pulmonary Lymphaducts, may easily be*

seen!

seen, if in dissecting a live Dog, you press the Top of the Thoracick Duct, that nothing may be poured into the Subclavian Vein : for then these Pulmonick Lymphaducts, because they cannot empty themselves into the common receptacle, now stop and filled, swell much and are very apparent. And if such a stoppage be made for a time in a Dog well filled with Food and Water, a milky Liquor will Sweat into the Lungs out of the Thoracick Duct, the Valves being unlocked : Yea, and the same Liquor will pass through the Lymphaducts placed far beneath the Reins, and will render them struited or swelled with that lacteal juyce, as if abounding with Milk. § 28. If at any time these Lymphaducts be obstructed or broken, there often follows a Dropsy of the Lungs or Breast, and sometimes Coughs and Phthisicks : for by these Vessels as so many Channels, the Aqueous humor is continually carried off, and distributed to the various intentions of Nature : Seeing they creep through the Superficies of the Lungs, and seems to be every where included in the little Membranes covering the aforementioned interspaces of the little Lobes, and also to end in them : Hence it is, That there was need of a great number of this kind of Vessels in the Lungs; for that the Blood is the hottest of all here, and hastily Circulated. § 29. The Description of the Pulmonick Nerves. These spring from the Par Vagum, and are dispersed every where through the

whole frame of the Lungs, and divided into almost innumerable branches and slips. Their various Trunks or Branches (whether great or small) being opened, & viewed by a Microscope, seem to unfold themselves into an innumerable company of extream slender Fibres. From the Fibres of the greater Trunks, issue the lesser Trunks; and from the Fibres of those lesser Trunks, other lesser twiggs or slips, and from those again others yet less, till the whole frame of the Lungs is vastly replenished by those little sprigs, which with great curiosity are spread every way. § 30. The use of these Nerves, as some think, are to give the instinct of Breathing, because it is hard to conceive after what manner the motion of the Lungs in breathing, Coughing, Laughing, and their other Actions should be always so exactly proportioned to the several exigencies of Nature. But there seems to be a more necessary use ; for since it is apparent, that the Tunicles of the Veins and of the Trachea are every where endued with muscular or moving Fibres, by which they are contracted ; it is evident that the Pulmonick Nerves do convey as well plenty of Spirits, as inclination of contraction to those Fibres. And it is not unprobable, but that from these Nerves convulsively affected, that the Chin-cough, Asthma, and a Palpitation of the Heart is often excited. § 31. From the manifold complications and intertextures of the five forementioned Vessels, with the small Bladders;

ders, a kind of fleshy structure of the Lungs seems to be constituted: and which appears also like a more solid Parenchyma, for as much as the Arteries and Veins being filled with Blood are stufft up; and the Trachea and Lymphaducts being emptied of their Air and Water, do fall together and seem to close. § 32. As for the Interspaces within the Lungs, they are thought to be certain receptacles and store-houses of the inbreathed Air: yet it is plainly apparent (by many experiments) that the Air blown into the Trachea (the only entrance of it into the Lungs) does not enter or blow up these interspaces of the little Lobes: but if you blow into a hole of any of these Interspaces, forthwith you shall see all these spaces putt up, and to swell through the whole lobe of the Lungs, so that all the little Lobes will appear distinct by large interspaces. § 33. The Lungs thus constituted are encompassed about or covered with a fit Membrane, consisting of two Coats: the one external and fine, like a subtil texture of nervous Filaments: the other inward, rough and somewhat thick, consisting of almost nothing but ends of Vessels and little Bladders, by reason of which its inward Superficies seems not unlike a Hive of Bees. This Membrane of two Coats (being blown up) has very many and large Pores, so that if Quick-silver be cast into the Tracheal branch of one of the lesser Lobes, almost filling the whole Membrane, it will every where run forth by the Pores.

§ 34. The Arterial Blood and the Air striking against this Membrane are reflected: the first is brought back by the Veins into the left Ventricle of the Heart, (a certain Aqueous part being transpired into the Lymphaducts.) The Air is returned back into the Systole of the Lungs, by the same passages of the Trachea, by which it was drawn in: For the old Air being grown hot, weak, and useless is to be breathed out, and continually fresh Air to be sucked in, to supply the Blood with niterous and cooling Particles: and since both works was to be done by the same Organ, or within the same passages, it was necessary that they should be done Alternately, 1. the one, then the other. § 35. The Passage of the Blood through the Lungs is helped, 1. By the distending of the Lungs by the inbreathed Air; whereby way is made for the distending of the Vessels of the Blood. 2. By the situation of those Vessels; the Arteria Pulmonalis is disseminated into the hinder or Convex part of the Lungs: because it is strongly forced forward by the Pulse: the Vena Pulmonalis possesses the foremost and concave part of the Lungs, that the Blood might as it were slide into the Heart. 3. By Anastomoses, (which are almost infinite) by which the Arteries and Veins are joyned together: and this is done by the ends of their branches which are joyned Mouth to Mouth: as also by Diapedesis, when in convenient places it can Sweat through the Pores of their Coats, or of the Parenchy-

ma. § 36. *The action and use of the Lungs.* The use of the Lungs is to Breathe: breathing is performed by two actions, to wit, inspiration and expiration: so that Breathing is nothing but the taking in and letting out of Air, by the Wind-Pipe that the Pulmonick Blood may be cooled & the vital flame excited. *Inspiration* is made by the *Diastole* or dilatation of the Lungs, wherein they are enlarged by the inbreathed Air: *Expiration* is made by the *Systole* or contraction of the Lungs, wherein they are strengthened by expulsion of the same, after the manner of a pair of Bellows. *Dilatation* is caused by the lifting up of the Brest: *Contraction* by the falling down thereof: The Brest is lift up by the eleven external intercostal Muscles, all which perform the office but of one Muscle; these arise from the upper Rib, and end by an oblique passage in the lower Rib. It is contracted or let fall by the eleven internal intercostal Muscles, whose original, insertion and use is just contrary to the former; these internal and external Muscles cross one another with oblique Angles in the form of a Roman X, so that the motion of the Lungs doth in part proceed from the motion of the Brest; and this is manifest in measure, by their connexion, being fastned above, to the Neck and Back by the Wind-Pipe: before, to the *Sternum*: behind to the *Vertebrae* by the *Mediastinum*: and below to the *Diaphragma*, by *Fibres* arising from the upper Mem-

brane of the Pleura.

XIV. *Of the Trachea Arteria, Aspera Arteria, Wesand, Lung-Pipe or Wind-Pipe.*

§ 1. *It is called Arteria because it contains Air; and Trachea or Aspera, from its roughness: and also to distinguish it from the smooth Arteries.* § 2. *It is a Pipe somewhat long made of Gristles and Membranes, which ascending from the Lungs (where it is scattered by many little branches and twigs through their whole frame) it leans all along on the Guller, and terminates in the Throat or lowest part of the Jaws.* § 3. *It consists of two parts, the lower which is specially called Trachea or Aspera Arteria, or Bronchus; the upper which is called Larynx, of which we shall treat (God permitting) in the next Section.* § 4. *The Trachea or Bronchus at the fourth Vertebrae of the Thorax, is divided into two branches, each of which go into the Lungs on its respective side, being variously divided and subdivided, as we have at large declared in the former Section.* § 5. *It is clothed with a double Membrane; the one External, the other Internal.* § 6. *The External is a thin one arising from the Pleura, which encampasses the whole Wind-Pipe, which sticks close to the intermediate Ligaments of the Gristles, carrying along with it the recurrent Nerves. By this also the whole Pipe is bound to the adjacent parts, and descends more safely and strongly into the Brest.* § 7. *The Internal Membrane which is the thickest and more solid arises from*

from the Tunicle which compasses the Pallate (and therefore is continued with the Mouth) and is furnished with many Fibres, as well nervous as musculous, giving sence and motion to it. It is smeared with an unctuous humor, to hinder its being dried up by reason of motion, loud Crying, &c. as also to defend it against the violence of hot or sharp Air drawn in: Or fuliginous and acrimonius Vapors breathed out. It knits together the Cartilages, (by filling up the Spaces between) as with a Ligament. § 8. *This inner Membrane doth excel with a most exquisite Sense,* being easily provoked by the smallest hurt, that immediatly it is forced into a Convulsive motion to wit, a Cough. but this acute Sense seems to be necessary, that it may raise it self, to expel whatever is troublesome thereto. § 9. *But in this inner Membrane,* there are two kind of Muscular Fibres, disposed in the same order, as in the Aorta and Guts. The Fibres of the upper order are straight, which while they are contracted make all the Circular Cartilages to be drawn nearer together, thereby to shorten the Trunk of this Vessel regularly in all its parts, to fit the intentions of Nature. Under these lye the other order of Fibres, which are Circular: these while they are pufft up, being contracted, the capacity of the Wind-Pipe is made more narrow. When therefore these muscular Fibres of either kind, make the Cavity to be straightened, according to either its Lon-

gitude or Latitude, it is apparent that they conduce to the discharge of the functions of breathing, making it more or less active, to breath quicker or slower, more softly, or more deep. § 10. *This inner musculous Membrane, has also two others, as if growing thereunto, viz one glandulous: and one vasculous, or full of Vessels.* § 11. *The vasculous is covered with a most thick Texture of Vessels of every kind, much like a Net:* The Arteries spring from the Bronchial branch (but have their original from the Aorta) and are inserted herein: these are accompanied with innumerable little Veins (from the Cava) the nervous sprigs meeting these two are variously folded and are said to spring from the *Par Vagus*: all these being complicated together, frame as it were a little Net, covering the whole hinder part of the Trachea. § 12. *Under the foldings of these Vessels, very small and whitish Glandules are every where dispersed, or rather cleave to them,* as they do in most other great Vessels, and on all membranous Bowels, on all which the *Lymphaducts* do wait. § 13. *The Arteries carry Blood for the nourishment of the part: The Veins convey away the overplus: The Nerves bring plenty of spirits, and excite the motive faculty of the muscular Fibres.* The superfluous humidity is imbibed by the Glandules, which they retard, till it can be sent back to the mass of Blood, through the *Lymphaducts*. When they are too much filled, by reason of the *Lympha* more largely

left

left, a humor distilling from the Glandules, as well as from the Arteries, into the Capacity of the Trachea causes a Catarrh. § 14. *Between these two Membranes is the proper substance of the Trachea, which is partly Cartilaginous, partly ligamentous, or membranous.* These Cartilages are equally distant one from another, in their whole passage, which are all knit firmly together by the aforesaid inner Membrane. The hinder part of every ring-like Gristle, where it lyes upon the Gullet (that it may be more convenient in the swallowing of Food) becomes a Membrane, altogether one and the same with the inner before described. § 15. *The Trachea is in part gristly, first for the Voices sake, for what makes a Sound must be solid: Secondly, for Respiration, for otherwise, were it soft, it would always fall together, and not be easily opened in Breathing.* It is also in part membranous, first, because was it one whole Gristle, or many circular ones, it would be always open, and not sometimes widen and fall together as it ought to do: Secondly, it would bear hard upon the Gullet, to which it ought to give way in Swallowing of Food, that the Gullet might be sufficiently widened, § 16. *The Shape of the Gristles are like the old Greek letter C: and therefore are said to be Sigma-shaped.* This Figure they keep till they enter the Lungs, where changing their Figure, they change their name: for the Wind-Pipes there consist of perfect Gristles,

round, four-square, or Triangular: but when they are joyned to the rest of the Vessels of the Lungs, they become Membranous. § 17. *The use of the Wind-Pipe is to be the primary Instrument of Breathing: first, to draw in Air, that by it, the Air may be conveyed into the Lungs, as in a pair of Bellows. Secondly, to expel the Air out, and with it fuliginous vapours and excrements, to be voided by the Nostrils and Mouth.* Hence it is, that the Pipes being obstructed, there is a wheezing and difficulty of Breathing, or kind of Hissing noise.

XV. Of the Larynx, or upper part of the Wind-Pipe.

§ 1. *The Larynx is the Head or upper part of the Wind-Pipe; situate in the Neck, and that in the middle thereof: being one in number that there may be but one Voice.* § 2. *Its figure is roundish, that it might be hollow for the Voices sake: but on the fore side it more bunches out; on the hinder side it is more depressed, that it might give way to the Oesophagus in Swallowing.* § 3. *Its magnitude is according to the Age: in youth it is strait, which makes the Voice shrill: in elder persons, it is wider, and therefore their Voice is bigger and more gross.* § 4. *The parts of the Larynx, or parts adjacent to it are Muscles, Gristles, Membranes, Vessels and Glandules.* The Muscles first offer themselves to our consideration because they move the Gristles, and give to the Larynx a voluntary motion, for that we speak when and as we please. There

These are in number fourteen, or seven pairs; of which two are common, viz. the *Sternothyroides* or *Bronchius* which straitens the Chink of the *Larynx*: and the *Hyothyroides*, which widens it: And five are proper, viz. *Thyrocyroides*, *Thyroarytenoides*, and *Arytenoides*, which shut the Chink of the *Larynx*: and *Crycothyroides lateralis*, *Crycoarythenoides laterale* which opens the said Chink. See their full description, in cap. 6. sect. 13. foregoing. § 5. The Gristles of the *Larynx* are in number five, viz. the *Scutiformis*, *Annularis*, *Guttalis*, *Arytainoeides*, and *Epiglottis*, which in elderly persons do sometimes attain a boney hardness, by reason whereof, some have escaped Suffocation, being hanged upon the Gallows. § 6. I. The *Scutiformis*, *Scutalis*, *Chypealis*, *Peltalis*, *Thuroides* *Buceoides*, or Shield-like Gristle, (so called from its form) is almost square, hollow within, and bunching without, but much more in Men than in Women, whose Necks are made even for beauty sake, by the Kernels placed by the *Larynx*: This very bunching out, seen on the fore side of the Neck, is called by some *Pomum Adami*. Adams Apple. In its upper Corners it has two long processes, wherewith by help of a Ligament, it is joyned to the lower sides of the *Osi Hyoides*; and in its lower, it has two likewise, by which it is knit to the following Gristle. § 7. II. *Keincooides*, The *Cricoides* or *Annularis*, the Ring-like Gristle, so called from its form, and its en-

compassing the whole *Larynx*: the hinderpart of which is broad, and very thick, but the forepart straiter and drawn in: 'tis called by some *Innominata*, the nameless Cartilage, because it was without name among the Antients. It is the *Basis* of the rest of the Gristles, by help whereof they are fastned to the *Trachea*, and therefore it is immoveable. § 8. III. *Agutivoides*, *Arytenoides*, *Guttalis*, the Ewer-like Cartilage, so called because it resembles the Spout of an Ewer, out of which Water is poured, if the 2 processes of the upper part are considered; which being joyned together, do make up that little Chink, (which modulates the Voice) called by some *Parva lingua*, *Lingula*, *Glotitis*, the little Tongue, since the Voice is only to be formed through such a narrow Chink; it rests upon the upper and hinder side of the *Cricoides*, in the Cavity of the *Thyroides*. § 9. IV. *Guttalis secunda*; this with the former some count but for one; but when the Membrane is taken off, it seems to be distinct from it: however its form, description and use is wholly the same: Here you may observe a certain hollownes, formed between the *Scutiformis* and the *Guttalis*, by the Membranes which hold up the Cartilages, into which, if while one is speaking or Laughing, and the *Epiglottis* is open, a Crum of Bread or a Drop of Drink do fall in, it causes Coughing; because it goes against the motion of the Wind: but if any thing goes
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down the Chink leisurely, by the sides of the *Larynx*, it does no such thing. § 10. V. *Ἐπιγλωττίς*, *Epiglottis*, so called from its covering the *Glottis*, *Lingula*, or Chink; which it does, that no considerable quantity of Meat or Drink should fall into the Wind-Pipe: its substance is soft, and its Figure resembles a little Tongue: or an Ivy-leaf, as *Hippocrates* saith: On either side a Membrane is fastned to the common Mouth, such as that which does compass the inner cavity of the *Larynx*. Now the *Epiglottis* does not so exactly close or shut the Chink, but that some small quantity of Drink may slip down the sides: for though we say, that Drink goes not into the *Trachea* or Lungs, it is to be understood of a great quantity; some small matter does certainly slip in: and therefore in Diseases of the *Thorax*, *Pectoral Lohochs*, *Electuaries*, and *Lozenges*, are prescribed to be held in the Mouth, leaning the Head backwards, till they dissolve away. The Chink is open when we Laugh, and therefore we ought to be careful not to Laugh when we are Swallowing Broth or other things, lest any part thereof should get between the *Epiglottis* and *Glottis* or Chink, and so immediatly cause Suffocation and Death. § 11. The Vessels of the *Larynx* are Veins from the internal Jugular: Arteries from the larger branch of the *Carotides* or sleepy Arteries: and Nerves (called by *Galen*, *Vocales*) from the recurrent branch of the *Par Vagus*, which help on the motion of the Muscles. § 12. The Mem-

branes of the *Larynx* are continuous with, and continued from the Membranes of the *Trachea*, and therefore we shall say no more of them in this place. § 13. The Glandules are twofold, those which are placed at the upper part of the *Larynx*; and those at the lower. § 14. Those at the upper part of the *Larynx* are seated at the sides of the *Uvula*, *Gargareon*, or *Columna*, and are called *Antiaides*, *Paristhmia*, *Tonsillæ*, or *Amygdalæ*, the Tonsils or Almonds of the Ears, (one on each side:) These being spongy, do receive the Aquosity of the Brain, where being turned into Spittle, it moistens the Tongue, *Larynx*, Throat and *Oesophagus*, and helps the Sense of Tasting, which cannot be performed without moisture: they are covered with the common Tunicle of the Mouth and have twigs of Veins from the *Jugulars*. They have also placed by them 2 little white and fistulous Ligaments, which receive the Serosity out of the Glandules, and send it forth into the Mouth. § 15. Those at the lower part of the *Larynx*, are also in number two, one on each side, which are situate at the sides of the *Cricoides*, and first ring of the *Trachea*. They are large and spongy, through which Veins are spread from the external Jugular, and in Women are more perspicuous. Their use is to moisten the *Larynx*, with a clammy and Fat; but not fluid juyce, that the Cartilages might be the more fit for Motion and Action, thereby to make the Voice the more Sweet and Pleasant. § 16. The use

use of the Larynx is to be an Organ of the Voice : now the Organs of the Voice are either near or remote : The near are the preparatory, as the *Aspera Arteria* : Or the adjuvant, as the *Muscles and Nerves* : Or proper as the *Mouth and Throat* : but the most principal part is the *Larynx* : and that part thereof called *Glottis* is the Proximate and most adequate Organ of the Voice. § 17. The remote are the *Thorax and Lungs*, without any help of the *Heart* : for (saith *Bartholinus*) if the four Vessels of the *Heart* should be tyed, and the *Heart* cut off, yet a *Dog* can both run and Bark : and the *Lord Bacon* in his *History of Life and Death*, tells us of a *Man*, who spoke some Words of his Prayers, after his *Heart* was taken out. § 18. The Voice is an Animal and Articulate Sound, made by the *Glottis*, through smighting the *Air*, as it is breathed in and out, being designed to signify the Conceptions of the *Mind* : for the *Air* being suddenly and strongly blown out of the *Lungs*, and the *Chink* being moderately straightned, the *Air* smites and the Voice is made. The Differences of Voices are infinite, being made either by the various formation of the *Mouth* : Or, by the different percussion and modulation of the *Air*, as you may perceive in *Pipes and Whistles* : Or, from the largeness, hardness, softness, moisture, dryness, coldness or heat of the *Larynx, Trachea, Lungs and Thorax* : Or, according to the situation and di-

stance of the *Ear*, by which the Voice is received intire and whole, or by *Peice-Meals*.

XVI. Of the Oesophagus or Gullet.

§ 1. Οισοφαγος, ὅτι οἷσι τὸ φαγνμα, Oesophagus, (quod cibum ad ventriculum vehat,) Gula, the Gullet, or Swallow, is an Organical part, and the Pipe or passage into the *Stomach*, as the *Trachea* is the Pipe or passage into the *Lungs*. § 2. It begins about the root of the *Tongue* or *Throat*, (where it is called *Pharynx*,) and from thence passes down directly between the *Trachea* and *Vertebrae* of the *Neck*, and the four first *Vertebrae* of the *Thorax* (on which it resteth) into the *Stomach*. § 3. When it is come as far as the fifth *Vertebra* of the *Thorax*, it gives way to the *Aorta* descending, turning a little to the right side ; afterwards accompanying the *Aorta* to the ninth *Vertebra*, it is raised again by means of the *Membranes* from the *Vertebrae* : and marching above the *Artery*, it passes through the nervous Body of the *Midriff*, and is inserted into the left Orifice of the *Ventricle*, about the eleventh *Vertebra* of the *Brest*, being accompanied with two *Nerves* from the *Par Vagus*. § 4. It is connected at its beginning, by the *Tunicle* of the *Mouth* (which is common to it and the *Stomach*) to the *Jaws and Larynx* : and by the *Membranes* arising out of the *Ligaments* of the back, to the *Vertebrae, Trachea* and parts adjacent. § 5. Its substance consists of three *Membranes* or *Tunicles*, that it might

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be the more easily stretched out in length and breadth. The first, is common with the Stomach, arising from the *Peritoneum*, exceeding thin, and in a manner destitute of all manner of *Fibres*: The Second Tunicle, is the first proper one, being more fleshy, thick, and soft than the other, consisting of round and streight *Fibres*: *Hofman* saith, It is a Muscle, because it suffers Convulsions and Palsies. The Third Tunicle, is the second proper, being the internal one, more nervous, somewhat subtil and harder, and consists of transverse and circular *Fibres*. It is contained with that Membrane which cloaths the *Pallate*, *Throat*, and *Lips*, and therefore when a Man is ready to *Vomit*, his lower Lip trembles. § 6. It has seven Muscles, viz. three pair, and one without a Fellow, first, *Sphæno-pharyngæus*, which pulls up the Mouth of the Stomach to receive in Meat. Secondly, *Cephalo-pharyngæus*, which seems to make the Membrane of the *Pharynx*. Thirdly, *Strylopharyngæus*, which dilates and amplifies the *Oesophagus*. Fourthly, *Oesophagus*, called by *Galen*, *Sphincter*, the Muscle without a Fellow, which *Sphincter-like*, contracts the Mouth of the Stomach, as that of the *Intestinum rectum*, doth the *Anus*: for a farther description of them, see cap. 6. sect. 15. aforegoing. § 7. The action of the *Oesophagus* is Animal (for that it is performed by Muscles) not Animal, seeing Swallowing does depend upon our free Will and Pleasure. § 8. Its use is to

convey into the Stomach Meat and Drink, and it is the common passage by which the whole nutriment is received into the Body. § 9. It has Veins from the *Cava*, the *Azygos*, *Intercostals* and *Jugulars*: Arteries from the *intercostal Arteries*, and internal *Carotides*: and Nerves from the *Par Vagum*. § 10. To the hinder part of the Gullet grows a glandulous Body, which yeilds a humidity to moisten the Cavity thereof, the better to assist the faculty of Swallowing: this if it be swelled too much, stops the passage of all liquid things.

XVII. Of the Neck.

§ 1. *Collum*, the Neck, so called because (instar Collis,) like a Hill it arises out of the Body, is added as an appendix to the *Thorax*, being a Medium between the Head and it. § 2. Its parts are either the containing, or the contained. § 3. The containing are the *Cuticula*, *Cutis*, *Membrana Carnosa*, and proper Membrane of the Muscles, viz. the *Musculus Latus*, which seems to be a production of the *Membrana Carnosa*, of all which we have spoken in their proper places. § 4. The contained parts, are, the Muscles, the *Trachea*, the *Larynx*, the *Oesophagus*, the *Pharynx*, the *Vertebrae*, the *Vessels*, and *Glandules*. § 5. The Muscles are 8, viz. 4 pair, of which the *Longus* and *Scalenus* bend it: the *Transversalis* and *Spinatus* draw it back on each side, see them cap. 6. sect. 16. aforegoing. The *Trachea*, the *Larynx*, the *Oesophagus*, and *Pharynx* (which is only the beginning or upper part of the Gullet) we have particularly

ticularly described in *sect. 14, 15, and 16. above.* The *Vertebrae* (which lye on the hinder part of the Neck called *Cervix*) are in number seven, the processes of some of which are perforated to give passage to the Vessels, which carry the Blood into the Head: See them described *cap. 7. sect. 10. of this Book.* § 6. As to Vessels it has five Veins, to wit, the *Cervicalis, Muscula superior, Muscula inferior, Carotis interna, and Carotis externa*: And five Arteries, viz. *Cervicalis, Muscula superior and inferior, Carotis interna, and Carotis externa*: Nerves it hath both descendent and recurrent, from the *Par Vagum*, and the Spinal Marrow. § 7. It hath Glandules or Kernels resting upon the *Cartilago Thyroides*, with other little ones, placed all along the internal Jugular, and orderly disposed, which receive the Aqueous part of the Blood sent into the Brain: Also under the lower Jaw, in the upper and forepart of the Neck, are two other Kernels, which do often swell, and in them the Kings-Evil is many times bred: Lastly, at the root of the Tongue are the *Tonsille, Amygdale*, or Almonds; of which four last, we have spoken in *sect. 15.* § 14, and 15. going before. § 8. The use of the Neck is, first, to convey and sustain the *Oesophagus, Stomach, Trachea* and Lungs. Secondly, to be an assistant to the Voice, and Swallowing: Hence it is, That such Creatures (as Fishes) which have no Neck, have no Voice. Thirdly, to be a medium for the passage of Vessels to the Head:

and of Nerves from the Head and Neck to the foreparts, the Shoulders, Cubits, Hands, and *Diaphragma*.

The Cutting of a wry Neck.

§ 9. This operation is performed after two manners: the first, is done by the Hook: the other without it. § 10. The wry Neck is caused from the Contraction of one of the Muscles of the lower Jaw, called *Musculus Latus*, or *Quadratus*, which arises from the upper part of the Sternum, Clavicula, and Acromium, and is inserted into the inferior Jaw, and firmly fixed in the middle of the Chin: But whereas this Muscle is very broad, so seldom or never is it contracted in its whole Latitude, but sometimes more forward, sometimes more backward, and sometimes more latterally, and accordingly the Seat of the Chord appears. § 11. Adjacent to this Chord, are the Jugular Veins, the *Arteria Musculæ*, the Recurrent Nerves, and Nerves of the hindermost branch of the seventh pair arising from the Neck: These in Cutting ought all (if possible) to be avoided: chiefly the Jugular Veins, because of the mighty flux of Blood, endangering the Patients Life: Also the recurrent Nerves (which spring from the external branch of the *Par Vagum*.) for that if they be wounded or cut a sunder, the Voice is lost, and the Creature becomes dumb. § 12. Now this contraction seems for the most part to be in the Tendons of the *Quadratus*, chiefly where it is joyned to the

Clavicula; but by reason of the exceeding shortning thereof, the Muscle (in length) seems to be a continued Chord: This Chord in many persons (especially if grown into years) becomes not only very hard, but perfectly Cartilaginous or Gristly: so that in Cutting, its hardness has caused a kind of Cracking noise. § 13. *The Cutting of a Wry Neck by the Hook.* You must carefully avoid all the beforenamed Vessels, and make a Transverse appertion of the Skin over the Chord, about an Inch or somewhat more on each side then with a Hook (made of Steel for this purpose,) being put under the said Chord, you must gently pull the contracted part forth, which must immediately be cut compleatly through by an Incision Knife, advising the Patient the while to hold his Neck up: this done you must heal it as a Green-wound, committing withal

the Sick to his Bed. This is the old Butcherly way, which puts the Patient to great pain and danger; & with-all a long Cure. § 14. *The Cutting of a wry Neck, by a new way, without the Hook.* Here you must strongly take hold of the Chord with your Thumb and Fore-Finger, with which feeling for the Vessels (chiefly the Jugular Vein whole approximate is the recurrent Nerve) you must carefully thrust it by: then having fast hold of the Chord with your Thumb and Finger, you must warily thrust in your Incision Knife, as it were beyond the Chord, & just above your Fingers; then making the Patient hold up his Head, the Chord will be cut a sunder, the outward Skin remaining whole; thus will the work be done, with no more but a prick appearing outwardly, and the Wound will be well in about 24 hours; without any effusion of Blood. See Tab. 8. Fig. 4.

CHAP. X. Of the HEAD.

I. OF the Head in general.

§ 1. *Κεφαλή, Caput*, the Head, is the highest part of a man, placed on the top of the Body, of a roundish long figure, but withal a little flatish, being the chief habitation of the Sensitive Soul. § 2. It is divided into two parts, viz. *Calva*, the Hairy Scalp, and *Facies*, the Face. § 3. The Calva is divided into four parts, to wit, first, *Sinciput*, the forepart of the Head, reaching from the Fore-

head to the Coronal Suture. Secondly, *Vertex*, the Crown of the Head, scituate between the Sinciput and Occiput, or hinder part of the Head. Thirdly, *Occiput*, the hinderpart, reaching from the Lambda-like Suture, to the first Vertebra of the Neck. Fourthly, *Tempora*, the Temples, which are the sides of the Calva, between the Ears and Eyes. § 4. The parts constituting the Calva, are the external or containing,

ing, and internal or contained.

§ 5. The containing are either common or proper. § 6. The common are the Cuticula, which is thinner, and softer. The Cutis, which is thicker than in any other part of the Body, yet porous to give vent for the Hair and its nourishment: The Membrana Carnosa, which in some so cleaves to the whole Skin, that they cannot move it at pleasure: Fat here is not necessary, lest it should hinder the passage of fülliginous vapors, and so cause the Head to be too big, create a perpetual pain, or breed an Apoplexy. § 7. The proper are the Pericranium, the Periostrion, the Muscles, the Bones, and the Menings: Of the two first and the last, we shall treat in the following Sections. The Muscles are nine pairs, 1. *Splenius*, the Muscle shaking the Head. 2. *Complexus*, the companion of the *Splenius*. 3. *Subsecundo* (called by some *Flectens*) the nodding Muscle. 4. *Recti majores*. 5. *Recti minores*, both which draw the Head straight backwards. 6. *Obliqui Majores*. 7. *Obliqui minores*, both which draw the Head obliquely backwards. 8. *Mastoides*. 9. *Fallopiani*, both which, are used to turn the Head. See cap. 6. sect. 2. foregoing. § 8. The Bones are in number eight: of which, six are proper, 1. *Os Frontis*. 2. 3. *Ossa Bregmatis*, which belong to the forepart of the Head. 4. 5. *Ossa Temporum*, the Bones of the Temples. 6. *Os Occipitis* seu *Lambdoides*, the Bone of the hinder part of the Head, and these 2 are common. 7. *Os Sphenoides*,

the Wedg-like Bone. 8. *Os Ethmoides* seu *Crisbriforme*, the Seive-like Bone belonging to the Nose. § 9. These Bones are joyned by 8 Sutures, of which three are true, viz. the Coronal, the Lambdoidal, and the Sagital: two are Bastard, viz. the *Squamosæ*: and three are common, viz. the *Frontalis*; the *Sphenoidal*, or *Cuneiformis*, the *Ethmoideal*, or *Crisbrosa*. § 10. The parts contained are the *Cerebrum*, *Cerebellum*, *Medulla oblongata*, *Cavities*, *Rete Mirabile*, *Infundibulum*, *Glandula pituitaria*, *Plexus Choroides*, *Glandula pinealis*. § 11. The part not hairy called *Facies*, the Face, contains, the Forehead, the outward parts of the Eye, the Tunicles of the Eye, the humors of the Eye, the outward parts of the Ear, the inward parts of the Ear, the Nose, the containing parts of the Mouth, the Gums and Pallate, the *Uvula*, the *Pharynx*, and *Os Hyoides*, lastly, the Tongue.

II. Of the Hair.

§ 1. *Crinis*, Hair is a Body cold and dry, small, thread-like, hard, and flexible, proceeding from the Skin. § 2. Their substance is compact, but apt to be cleft, according to their length. § 3. The immediate material cause of Hair (according to Bartholine,) is fuliginous and excrementitious vapors, thick and earthy, yet somewhat glewish and clammy; and this appears to be reasonable, for they grow for many years on dead men, as *Paræus* has observed in an Embalmed body; therefore they are not produced of Blood, as some vainly imagine. § 4. The re-

more matter of the Hair is a superfluous humidity, especially that which is contained in the Glandules, and therefore all glandulous places (as the Ears, Arm-pits, Groins, Testicles, &c.) are commonly replenished with Hair. § 5. The Skin on which Hair grows must be moderately dry, lest the Hair should fall: but not too dry, lest it should not make its way through. The Skin ought indeed to be lax, rare, and porous, for that it is through the Pores that the Hair springs; and therefore it is, That no Hair grows on a Scar, because it has no Pores. § 6. The efficient cause therefore of the Hair is not the Soul, nor any Vegetative making faculty, but a fit and proportionate heat, which dries & thrusts forth those fuliginous vapors into the Pores of the Skin; so that proper matter, fit place, & convenient heat, are the chief things requisite for the Generation of Hair. § 7. From hence by the rule of contraries the cause of Baldness may be gathered. I. When the matter breeding them is wanting. II. When the place or Skin is too dry, and yet grows dryer, nor being moistened by any adjacent part. This happens for the most part to the forepart of the Head, where the Skin becomes dry, and hard like a shell, for seldom is any man bald on the hinder part of his Head. III. When the heat is too great or too small. The first is apparent in Letcherous persons, which become Bald by overheating the humor in too frequent Coitions. The later is evident in Aged persons in whom

the natural is decayed. § 8. The figure of the Hair is long and quadrangular, like the Straks of some Plants: in dry temperaments curled and blackish; in moist, straight, smooth or extended in length: they are also said to be hollow or porous, as the Disease Plica does shew. § 9. The magnitude of the Hair is according to the thickness or thinness of the Skin, its compactedness or rarity: and also according as the matter or humor abounds or is wanting, and the heat strong or weak. They are short and thin or small in Infants, longer and harder in Men, but longest of all in Women. § 10. Their colour is variable, according to the Country, ambient Air, humor abounding. Age, Temperament of the Persons, &c. for in hot and dry Countries, the Hair is dry, brittle and curling: in cold Countries it is, flaxen, light colored or yellow, soft flexible, and straight or smooth. The like understand of the Humor, Age, and Temperament. Bartholine saith, That he has seen Green haired men at Hafnia; and that those who work in Mettals have their Hair commonly Green. Marcellus Donatus relates a story of a Man Grey-haired through Age, whose Skin became of a Verdigrise, or yellow green colour, and his Grey Hairs became also of the same hue. § 11. The Ends or Uses of the Hair is four-fold, 1. To cover and defend the parts. 2. To Adorn them. 3. To purge the humors and spirits of fuliginous vapors. 4. To shew in part the Temperament of the Body.

III. Of the proper containing parts.

§ 1. The proper containing parts are five, viz. the Muscles, the Pericranium, the Periostion, the Cranium, and the Menings.

§ 2. Of the Muscles and Bones we have already largely treated in Cap. 6. sect. 2. cap. 7. sect. 4. and in sect. 7. and 8. of this Chapter, to which places we shall refer you: Of the Membranes whether external or internal we shall treat particularly in what follows.

§ 3. The Pericranium is said to invest the whole Skull, except the Bones which lye under the Temporal Muscles, for there the said Membrane covers the *Musculi Temporales*: and this was thought fit: for had it invested these Bones, it must without all doubt have passed between the *Os Petrosum*, whence from its moving and rubbing, in eating, speaking, or any other motion, it would have always felt intollerable pain.

§ 4. And here we may take notice of a *Hydrocephalos* or *Dropsy of the Head*, which is caused by a serous juyce, collected and shed abroad between the Skull and *Pericranium*; or between the Skull and *Dura mater*, or within the Ventricles of the Brain, which overflows as it were on all sides: In Infants it is caused by Squetzing the Childs Head at time of Birth: In elder persons, it is caused from a cold and moist distemper of the Head and whole Body, or a translation of serous humors to the Head, which is often swelled up to a vast compass by the humors either included under the

Tunicles, or included within the Head.

IV. Of the Pericranium.

§ 1. The Pericranium is a Membrane thin and soft compassing the Skull, and springing from the *Dura Mater*, coming out at the Sutures of the Skull, which may be plainly seen in Infants, before the time that they are fully closed Tooth within Tooth. § 2. That it springs from the *Dura Mater*, the great consent between the Brain with its Menings, and the Pericranium, does sufficiently prove: also this production of the Pericranium from the said *Dura Mater*, covers the whole Skull, the place of the Temporal Muscles only excepted, as is afore declared: Hence it is, that the Temporal Muscles being wounded, there is a horrible pain and Inflammation. § 3. But the Sutures of the Cranium, being by Age hardened and compressed, the continuity of the said Membrane with the *Dura Mater* is broken off, so that there is only an appearance of Fibres, by which some have been deceived, and thought that the Pericranium was united to the *Dura Mater* by no other Medium.

V. Of the Periostion.

§ 1. This is a most thin and nervous Membrane, and therefore of exquisite sense, by means whereof, all the Bones (the Teeth only excepted) become sensible. § 2. This Membrane some (as *Fallopius*, *Laurentius*, *Read*, and others) deny: But *Vesalius*, *Banbinus*, *Bartholinus*, & *Rolanus* distinguish it from the Pericranium: because they may be accurately separated by a skilful

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Anatomist. § 3. *Riolan in particular saith, That the Pericranium is not the Periostium of the Skull, but is scraped from the Skull, as from other Bones, being a thin Skin which immediately covers it.*

VI. Of the Dura Mater.

§ 1. *The Meninges of the Brain (called by the Arabian Matres, as if all the Membranes of the Body were propagated from them) are in number two, viz. the Dura and Pia Mater.* § 2. *The Dura Mater called also Crassa Meninx, the harder or thicker Membrane, doth cover the Scull all over on the inside, as also all its Cavities and hollowneses, sticking firmly to its Basis, so that some think its original to be from thence.* § 3. *Its upper superficies is rougher than the under, and replenished with many Veins representing a Fig-tree leaf.* § 4. *It compasses the Brain very loosely that it might not hinder its motion, nor compress its Swelling Vessels.* § 5. *It is fastned to the Pia Mater and Brain by Vessels, to the Skull by thin membranous Fibres, springing out of its self, which pass through the Sutures, and constitute the Pericranium.* § 6. *It consists of a double Membrane, the upper towards the Cranium is harder, rougher and less sensible, because it was to touch a boney substance: the lower is smooth slippery, and as it were bedewed with Water.* § 7. *It is fourfold where it distinguishes the Cerebrum from the Cerebellum: On the Vertex it is double, where it divides the Brain into the right and left part: and because the redupli-*

cation or foldings are in the hinder part broad, growing afterwards narrow by degrees, whereby it much represents a Reapers Instrument, it is called Falx, the Sickle. § 8. *In this Falx are always found four (and sometimes, as Sylvius saith, seven) Cavities (called by Galen the Ventricles of the Dura Mater) which are receptacles of the abounding Blood and Spirits; whence also they are called Sanguiductus, Cisterns of Blood.* § 9. *The first and second of these Cavities begin at the bottom of the hind part of the Head, by the sides of the Lambda-shaped Suture, where the Veins and Arteries disburthen themselves: the Veins of the Jugular branch are manifestly Inserted, and receive Blood out of the Cavities; but the Arteries do disburthen themselves into them.* § 10. *The former two Cavities are at length united, which makes up the third Cavity, and is the longest of all, for it goes along the Head to the Tops of the Nostrils, and contains much Blood. When these Cavities are opened, vast quantities of Blood flows out by the Nostrils.* § 11. *The fourth Cavity not reaching to the Skull as the former, is short, and goes inwardly between the Cerebrum and Cerebellum, unto the Glandula Pinealis: it is said to arise where the three former meet together, which beginning is called by Herophilus, Torcular, the Wine-Press. But Bartholine (following the famous Franciscus Sylvius) thinks, That the third (the uppermost of the Falx) and fourth Cavities do end into the two former, or great*

great lateral ones, not by a straight passage, but inclining to the sides: so that there seems to be no common concurrence of these four Ventricles, though these great latteral ones are joyned by an intermediate passage. § 12. *The fifth Cavity (when it is to be found) is carried (as Vesalius saith) through the lowest part of the Sickle, and terminates into the fourth Ventricle.* § 13. *The sixth and seventh (when found) are smaller and lateral ones, on each side one, being distant about an Inch from the greater, situate in the Dura Mater, which distinguishes the Cerebrum from the Cerebellum.* § 14. *From the Cavities arise the branches of the Jugular Veins; into which the Arteria Carotides, (being variously scatter'd upwards and round about) are opened by mutual Anastomoses.* § 15. *The use of these Ventricles is to receive the Arterial Blood, by means whereof they pulse or beat: they receive this Blood from the Arteria Cervicalis either immediatly: Or, mediately by the little twigs of the Cavities, as Walæus suspects. From these Cavities, through the Jugular Veins which are joyned to them, it runs back downwards to the Heart, to be again recruited. This you may prove by Ligatures. for if the Jugular is bound, it is tumified towards the Head, but falls away towards the Cava and Heart.* § 16. *The use of the Dura Mater is, first, to invest the Brain, the Marrow, and Nerves thence arising. Secondly, to distinguish the Cerebrum from the Cerebellum, and to divide the*

Brain into two parts. *Thirdly, To give a production to the Pericranium, in sending Ligaments through the Sutures.*

VII. Of the Pia-Mater:

§ 1. *This Membrane (called also Tenuis Meninx, from its thinness) doth immediately invest the brain, its parts and Ventricles, lest they should run about; it enters the windings every where, and may for this cause be more easily separated.* § 2. *It is both more sensible, and has more Arteries than the Dura: It also receives from the Crassa Meninx innumerable Branches of Vessels, and bestows them upon the Brain.* § 3. *Olshafius saith, It is thicker in the third Ventricle than in the rest: and Riolanus saith, It is three times as long as the Crassa Meninx, because it passes into the inner part of the Brain; covering it as a Veil, and dividing its wholebulk into three parts: for near the upper half of the Brain, which covers the Ventricles being seated upon the Corpus Callosum, it is on both sides circularly separated & lifted up as high as the Original of the Spinal Marrow, which do conjoin that upper portion.* § 4. *Its use is first, to bestow an exquisite sense: Secondly, to keep the soft substance of the Brain from running abroad: Thirdly, to cloath the Cerebrum, Cerebellum, and Medulla oblongata, from whence the Nerves arise.*

VIII. Of the Brain in General.

§ 1. *The Pia Mater being removed, the Brain is presented to the View: its external Color is whitish that the Animal Spirits might be clear: its Substance is white, soft,*

soft, thick and viscous, differing from all other parts of the Body, as the Testicles do. § 2. *Its Magnitude is in proportion to the rest of the Body*; but for the most part Mankind has twice as much brains as an Ox, and indeed the biggest Brain of all living Creatures, it weighing for the most part 4 or 5 pounds: This great quantity was necessary for the multitude of Animal Functions, and plenty of Animal spirits, which cannot be generated by great store of Blood. And, among mankind, Men have more Brains than Women, because for the most part their Bodies are greater. § 3. *The External Circumference of the Brain, is full of Turnings and Winding, not much unlike those of the Guts*: That the Vessels, being conveyed through those Windings or furrows, might be the more safely carried throughout the substance of the Brain to nourish it: lest otherwise by the continual motion of the Brain, they should be in danger of breaking chiefly at the full of the Moon, at what time the Brain does most swell within the skull. § 4. *The Brain is divided into three parts, viz. the Cerebrum, or foremost part: the Cerebellum, or hindmost part: the Medulla, marrow, or inmost part, which lies deep under the Brain.* § 5. *Also in dissecting of the Brain, it is divided into three parts, viz. the Uppermost, the middlemost, and the lowermost.* § 6. *In the Uppermost these parts are to be seen; the Windings, the Falx, and the Corpus Callosum.* § 7. *In the middlemost Under the Fornix, you may*

behold the Ventricles, the Plexus Choroides, and Cerebellum. § 8. *In the Lowermost you will find, the Infundibulum, the Glandules under it, the processus mammillares, Ten pairs of Nerves, and the beginning of the Medulla Oblongata or Spinalis.*

IX. Of the Cerebrum or Brain in Particular.

§ 1. *The Cerebrum is of a roundish shape, answerable to the Skull, but inwardly it has certain Knobs called by some Processus Mammillares.* § 2. *Its Colour is white: its Temperament, cold and moist, which appears from its color and Substance: Its Substance is a Parenchyma proper to it self, such as is not in the whole Body besides: It is soft and moist, that being the Seat of Imagination, it might the more easily receive the impression of all sorts of Images, conceptions and Idea's, yet it is not so soft as to run about, but of such a consistency, that what is imprinted therein, may continue for a time; hence it is also found to be the seat of Memory.* § 3. *It has several Vessels disseminated through it, viz. many capillary Veins and Arteries, as Galen affirms, and Bartholinus often saw: But it has no Nerves, whence, it is said to be void of all sense.* § 4. *The Veins which run through the Substance of the Brain are, first, the five Branches of the Jugulars; some of which go into the Cavity of the Dura mater; others run up and down through the Tunics and Substance of the Brain. 2ly, very small twigs, which on each side, slide into the Substance of the Brain, out of the Cavities of the*
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Dura Mater, which according to *Walleus* are the same with the former. § 5. *The Arteries are four, from the Carotides and Cervicales: of which the former are disseminated into the Brain upwards and downwards: the latter into the Cerebellum.* In the chinks, the same *Caroticks Arteries* are carried in very great numbers, both in the Surface and in the bottom. § 6. *It has divers turnings and Windings, which fold in deeply, especially in the fore-part of the Head, where the great Fissure or Chink, divides the Brain outwardly, even to the Medulla or Marrow.* There is a *Winding Clift* (saith *Sylvius*) which begins in the forepart, about the roots of the Eyes, whence, according to the bones of the Temples, it goes back, above the root of the *Spinal Marrow*, and divides the Upper part of the Brain from the Lower. § 7. *The use of the Brain is, first, to be the Habitation of the sensitive Soul, for the managing of Animal Functions.* Secondly, to be the universal Organ of Sense, as the Eyes, Ears, Nose, &c. are particular Organs: for it gives Judgment of the Objects of all the Senses, and of Animal Motion, although it self has no such motion; but it has a natural motion, which is perpetual, proceeding from the Arteries: to wit, a motion of *Systole* and *Diastole*, Of *Contraction* and *Dilatation*: this motion may be seen in wounds of the Head: and in the foreparts of the Heads of New-born Children (whose Bones are soft and flexible) where the Brain has bin seen to pant. § 8. *In its Systole*

or Contraction, it drives the Animal spirits into the Nerves, through whose Channels they are conveyed and distributed over the whole Body, giving to it the Faculties of both sense and motion: and by the same Systole it drives the Blood out of the Ventricles into the Veins, by which it is conveyed to the Heart. § 9. *In the Diastole or Dilatation, the Brain draws the air by the Nostrils, to temper the heat of the Veins and Arteries; and, to make the Animal functions, which are Feeling and Moving to be the more exquisitely performed: also by the same Diastole, it draws Vital spirits with the Arterial blood, out of the Carotick Arteries.* § 10. *Hence it appears that the Matter of the Animal spirits is twofold: first, Air: Secondly, Arterial blood full of Vital spirits: the place of its Generation, is not (according to Bartholine) in the substance of the Brain, or in the Ventricles in the forepart thereof; but in the long part, or tail of the Medulla, wherein is engraven the Calamus Scriptorius.* But after it is generated, it is contained and kept in the Brain, as in a Store-house, the Brain being truly the receptacle of the Animal spirits, for that it is the same with the interior marrowy substance of the Nerves.

X. *Of the Cerebellum, or little Brain.*

§. 1. *It is seated in the Occiput or hinder part of the Head, as it were under the Brain; having the same motion, substance, consistency, and colour with the Cerebrum, save that this is more of an Ash-color than of a White.* § 2. *It differs from*

from the Cerebrum in Bigness, not being above the third part of the quantity thereof: in figure, for this is more flat than round: in Cavities, for within, it is not hollow: sometimes a little in colour, as tending to a yellowish Grey: in Turnings and Windings, of which, the Cerebrum has many without any order or Method; the Cerebellum hath only circular and ordinate ones stretch'd one over another like Plates or scales. § 3. It is constituted of four parts, of which two are Lateral, one on each side making as it were a Globe; and two processes in the middle called Vermiformes, to wit, the foremost, and the hindmost: these are variously orbiculated, consisting of many Transverse parts, and coupled with a thin Membrane: their figure is round, and in their Extremities they are thin and convex, and about the bigness of a small white Pea, situated at the seat of the noble Ventricle, the one before, the other behind. § 4. At the hind part of the Channel of the Medulla Spinalis, in the Circumference of the Noble Ventricle, there proceeds from the Cerebellum, two other Orbicular processes, sometimes two, and sometimes three on each side: the greatest of which are placed by the Vermiformes: these processes Karolus calls Pons Cerebelli. § 5. The Use of all the processes is to hinder the Noble Ventricle from being obstructed by the pressure of the Cerebellum; and to help the motion of the Ventricles like a Valve: for the Vermiformis being shortned opens the way, which goes from the third to the

fourth Ventricle. The use of the Pons Cerebelli is to be as a Bulwark to defend the Noble Ventricle. § 6. The use of the Cerebellum is the same with that of the Brain: and though some Authors say, That it is the Original of the hard Nerves, they are deceived: for not any Nerves have their Original from hence. § 7. It has Veins and Arteries interposed between the several plates, which are carried through the Pia Mater like Nets; these arise from the branches of the Cervicalis and Carotide, and at last run into the fourth Ventricle.

XI. Of the Medulla Oblongata or Spinal Marrow.

§ 1. This is the third part of the Brain, and that which lies deepest and inmost, under the Brain: being by some (but ignorantly) confounded with the Brain it self. § 2. Its Substance is not double, as it is in the Brain, but Uniform, more white, hard, and compact, which as it grows in length becomes yet more and more hard; in this are seated the Ventricles (so called) but not in the Brain it self. § 3. This Spinal Marrow differs from the Brain, in situation, in colour, in consistency, in the going between of Lines, in magnitude, in figure, in Cavities, for the Brain has none; and in Nobility or excellency. § 4. Bartholine divides this Marrow into two parts, viz. the round and the long. The round or Globous, which he calls the Head of the Marrow, resembles the Figure of the Skull, and is of great bulk, having in it three Cavities or Ventricles: The long part, which

he calls the Tail, arises immediately out of the former like a certain Tail, wherein is placed the *Calamus Scriptorius* or fourth Ventricle, the place of the Generation of Animal Spirits, and from which all the Nerves have their original or beginning. § 5. This *Medulla oblongata* is also considered in a twofold manner, viz. 1. as it is contained within the Brain or Skull, from whence the Nerves arise commonly attributed to the Brain. 2. As it is contained in the *Vertebrae* of the Back-Bone, where it obtains the title of Spinal Marrow. § 6. That which is within the Skull is about four inches in length: that which is without, and begins at the great hole, reacheth to the *Coccyx* growing smaller and smaller, until at last it ends in many small twists, which resemble a Horse-Tail. § 7. The original of the Spinal Marrow, (so called because in its progress, it is contained in the *Vertebrae* of the Spina, or Back-bone) is at the lowest part of the Brain, springing both from the *Cerebrum* and *Cerebellum*: so that it has (as it were) four roots; two which are greater, from the forepart of the Brain, about the middle of the Ventricle, which are called *Nates*; and two, which are lesser, from the inner and lower part of the *Cerebellum*; which are called *Testes*: These running towards the Back part, meet together, and make the *Medulla spinalis*, which *Solomon* calls *חֲבֵל הַכֶּסֶף* *Chabel hakheseph*, *funis argenteus*, the Silver Chord. § 8. It is also divided into a right and left part, even

as the Brain, by the *Pia Mater*, which immediately invests the same, as may be seen in the marrow of an Ox indifferently boiled. § 9. About the sixth and seventh *Vertebrae* of the Brest, it is divided (as it were) into many little Chords: If the Spinal Marrow (in one newly dead) be presently cast into cold water, and these Cords be separated, you may see the resemblance of an horses tail, divided into many long hairs, chiefly towards the end. § 10. It is covered with a threefold Membrane: the first, which immediately covers it, springs from the *Pia Mater*, and passeth between both the parts of it, dividing it all along (as it were) by a long Section, till you come to the *Vertebrae* of the Loynes; hence is the cause that one side only is Paralytick. The Second is from the *Dura Mater*, and covers the former, without any distance between, so that they touch one another. The Third which is external, springs (according to *Galen*) from a strong Ligament which joyns together the *Vertebrae*, and ends in a strong Tunicle, left in bending the backbone, the marrow should be hurt: round about this a clammy humour is shed to keep it moist. § 11. In the beginning of this Marrow, while it is yet in the skull, you may find engraven an hollow Cavity called the Noble Ventricle; (but by *Galen*, the Ventricle of the *Cerebellum*, and by others the fourth Ventricle of the Brain, though it be not in the Brain, but between the *Cerebellum* and *Spinalis Medulla*, being caused of Necessity, by reason of the parts aforesaid;) This Ven-

Ventricle after a straight and even progress, is widned on each side, and sharpened afterwards into a point, by reason of which shape, it is called *Calamus scriptorius*, the writing Pen or Quill. § 12. *But as all this Cavity is between the Cerebellum and Medulla oblongata*, or production of the Marrow, so the chief Cavity is the lowermost which is in the marrow. § 13. *The Use of this Ventricle* (according to Bartholine) is to be the place where the Animal spirits are both generated and elaborated; because saith he, it is 1. The most pure and subtil: 2. It has a Cavity sufficient for that purpose: 3. It is so conveniently seated, that it can readily send forth Animal Spirits into all the Nerves round about it. § 14. *It is true, that several learned men have been of another mind: some thought the Animal Spirits to be bred in the fore Ventricles of the Brain; but that cannot be, because they are full of Excrements: others will have them to be bred in the Substance of the Brain, and some in the Body or Substance of the Medulla oblongata; but these can scarcely be because the production of so subtil a Spirit, doth require some Cavity: Lastly, others have thought them to be generated in the Rete Mirabile, Or in the Plexus Choroïdes, but in these Vessels Nature seems to provide for the preparation of the matter, by reason of their intertwinings.* § 15. *Hence then, it more reasonably appears, that the Animal Spirit is generated in the Cavity of the Medulla oblongata; or in the*

noble Ventricle: but the matter thereof is prepared in the Rete Mirabile, and yet more in the Plexus Choroïdes. And that the remaining part of those Spirits which are not assus'd into the Nerves of the Brain, and Spinal Marrow, are retained and preserved in the whole Brain, as in a Store-house. § 16. *The use of the Medulla oblongata, is to be the original of all the Nerves: as well those ten pair, which are attributed to the Brain: as of those thirty pair, passing through the Back-bone: now every of these Nerves arise with many little Strings or Filaments, not much unlike Fibres, which passing through the holes of the Vertebrae, are there joyned together by the Membranes, as if the Nerve it self was but a single Cord.*

XII. Of the Cavities of the Brain.

§ 1. *The Ventricles of the Brain according to the Vulgar manner of dissection are said to be in number three; which are foremost and uppermost, and one in the middle: to which some add a fourth of which we have spoken before.* § 2. *But if Dissection be made beginning from beneath, the former three will appear but two only: the third being common, and only a Portion of the other two; which two also are thought to be but one, which is in the middle, whose beginning is divided into two: Or there are two Processes which receiving the Excrements, carry them into the middle it self, which is accounted the third: for there is but one continued*

Cavity of the Brain, and the two Ventricles so called do end in one common Cavity. § 3. So that in Truth there is but one Ventricle, Or, if you so please, one parted into two by the Septum Lucidum; the third being the Vacuity between the Nates and Testes; but this is not within the substance of any part of the Brain, but caus'd of necessity by reason of the parts aforesaid; and the fourth is the Noble Ventricle; so that for Decrines sake, four Ventricles are set down. § 4. The two former Ventricles, are all termed the foremost and the uppermost, because they consist also of the hinder and lower parts of the Brain: and therefore might be more properly called the lateral Ventricles, right and left, being so divided by the Falx or Sickle-like process. § 5. They are the greatest of all, Crooked, full of Windings, Semicircular, and cloathed with the Pia Mater. Their form is much like the Moon when she is in her first and last Quarters, or not much unlike to a Horse-shoe: and this was first discovered by the most exquisite *Franciscus Sylvius*, and afterwards demonstrated by the Renowned *Bareholinus*: now, to find the true figure you must cut the Brain deep towards the Skull, or the Temples, on each side, because it is deeply Sunk into the *Corpus Callosum*. § 6. Now in the Brain is a two-fold substance, the upper part whereof is softer, and of an ash-colour: the lower whitish, where the Ventricles are joined: if the upper part of this Substance be removed with a Knife, the

Corpus Callosum will forthwith appear, which is nothing else but the whitest and most solid substance of the Brain: it is so called, because the substance thereof is harder like a *Callus*, where the Ventricles seem to rest upon the two foremost extuberances.

§ 7. Two roots from the Spinal Marrow do pierce a good depth into the substance of the Brain, to the upper and former part whereof, chiefly where it looks inward, the Brain being continued, it disperses it self every way, chiefly outwards and backwards, and by little and little wreaths and contracts its lower extremities inwards and upwards, till at last being attenuated, it does on all sides embrace the root of the said Spinal Marrow with a Fringe or Lace as it were, a little below the place where it springs therefrom, and so forms the lateral Ventricles. § 8. But in the foremost and inner part, whose substance is whitish: ascending from each root, it makes one Body called *Corpus Callosum*, and is carried back, covering the middle distance between the Roots, which is the third Ventricle, and the wide Orifices of the lateral Ventricles opened therein, framed by it self, whereby it makes the *Fornix* or Vault, and so is continued to the inner part of the edge of each Ventricle. § 9. These Ventricles are distinguished by a loose and wrinkled partition skin, called *Septum Lucidum*, for that being held against the Light, it shines because of its transparency: this, some say, springs from the *Pia Mater* doubled: others

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lay (and that more truly) it springs from a most thin part of the Brain it self, for having removed the *Cerebrum* and *Falx*, if you search the *Ventricle* of the opposite part, and lift up that part of the Brain continued with the *Corpus Callosum*, at the Orifice of the third *Ventricle*, you may easily discern it to be a small part of the Brain. Above, the *Septum* cleaves to the *Corpus Callosum*, but below, to the *Fornix*.

§ 10. The lower whitish part, where the *Ventricles* are joyned (under the *Corpus Callosum*) is called the *Fornix* or *Vault*: Or *Testudo*, the Belly of a Lute: in the upper part it is Arched, in the lower part *Convex*, being of a triangular form, consisting of three shanks, one before and two behind.

§ 11. The third *Ventricle* is a long Chink, being the meeting together of the *Ventricles* aforesaid, towards the hinder part. In it there are two passages: the first, in the forepart, which goeth straight-ways down the *Infundibulum* to the *Glandula pituitaria*, that it may there void its Excrements: The other is in the hinder part, which being cloathed with a Membrane, passes under the *Nates* and *Testes*, to the fourth, or noble *Ventricle*, that the prepared matter of Animal Spirits might pass into the place of their Generation: This other passage is by some called *Arx*. About this, between the Eminencies, there is a long Chink called *Vulva*. Now this second passage is only a space, arising upon the mutual contact of the four trunks of the *Spinal Marrow*. § 12.

The *Nates* or *Buttocks*, and *Testes* or *Stones*, are four orbicular prominences: These two *Nates* are Portions of the *Medulla oblongata*, which arise from the *Cerebellum*: The *Testes* are Portions from the roots of the *Cerebrum*: The former are sometimes the greater, and sometimes the latter are the greatest, sometimes they are equal. In like manner they call the *Glandula Pinealis*, *Penis*: But saith *Bartholinus*, this is a trifling peice of business, to impose such names as these. § 13. The use of these three Cavities or *Ventricles* is to be the receptacles of Excrements, which is probable, first, from their structure, because there is a passage from the *Ventricles* to the *Glandula Pituitaria*. Secondly, because the Surface of the Cavities is continually moistned with a watery or pituitous humor. Thirdly, because they are often found full of aquosity and flegmatick matter.

XIII. Of the *Rete Mirabile*, or wonderful Net.

§ 1. The *Rete Mirabile* or *Plexus Retiformis*, is so called from its wonderful and admirable structure, shewing like many Nets heaped up together. § 2. It is difficult to be discerned in mankind (for which cause sake *Vesalius* denies it,) but much more apparent in Calves and Oxen. § 3. It lies under the *Basis* of the *Cerebrum*, encompassing the *Glandula* at the sides of the *Os Sphænoïdes*; and is formed of the *Carotick* and *Cervical Arteries*, running from the Heart to the *Basis* of the Brain, by which it is repleat with Blood and

and Spirits, and some twigs of the *Jugular Veins*, for the carrying back of the superfluous Blood, after the preparation of Animal Spirits. § 4. This Net is placed by Riolanus at the production of the *Plexus Choroides*, which creeps through the former Ventricles. § 5. Its use is to detain the Blood and Vital Spirits, for a long time, in order to its preparation, for the Generation of Animal Spirits.

XIV. Of the Infundibulum, or Funnel.

§ 1. It is called Infundibulum from its shape; for above, the Head thereof is large; below is a long and straight Pipe: its Head or larger part may be properly called Pelvis, the Basin, § 2. Its original is large, at the hinder hole of the third Ventricle, through which the Excrements of the Ventricles pass away, into this Funnel. § 3. Its Figure is an orbicular Cavity, (sometimes triangular, with acute or obtuse Angles:) Its substance is made of the *Pia Mater*, where it circumscribes the Basis of the Brain: being of a dark colour. § 4. If it be opened you will find it full of thick Flegm; and Riolanus saith, That it has four little Pipes, which distil Rheum or pituitous Serum, through the four holes resting upon the *Sella Sphenoidæ*. § 5. Before this Funnel, there where it receives the serous Excrements out of the Ventricles, two little whitish Kernels or protuberances of the Cerebrum are placed, which you may see, if you turn the Brain upside-down.

XV. Of the Glandula Pituitaria, or Rheum Kernel.

§ 1. It is so called for that it receives the Excrements of the Brain out of the Ventricles out of the Funnel; and therefore it is placed at the end of the Funnel in the *Sella Sphenoides*. § 2. Its substance is harder and more solid than that of other Glandules: and is cloathed with the *Pia Mater*. § 3. On its upper side it is concave or hollow: on its lower side it is Convex or bunching. § 4. Its use is to receive the grosser Excrements collected in the Ventricles of the Cerebrum, (for the thin and fuliginous pass out at the *Sutantes*;) for the Cerebrum being of a large magnitude, requires much nourishment, whereby many Excrements are bred, chiefly when the Brain is distempered. § 5. From this Glandula, Excrements are sometimes cast into the *Pallat* of the Mouth, and sometimes they drain away by the perforations in the Basis of the Skull.

XVI. Of the Plexus Choroides, or Chorion-like Net.

§ 1. Between the foremore Ventricles and the *Testudo* or *Fornix* is placed the *Plexus Choroides* or *Reticularis*; so called, being a Con- texture of two kinds of Vessels, viz. of small Veins and Arteries, sent partly from the Temporal Arteries, and partly from the Veins of the *Dura Mater* in the fourth Ventricle: it is also called *Choroides*, because the Texture (being made in a thin Membrane, is like to the Membrane *Chorion*, wherewith the Child is wrapped in the Womb. § 2.

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Within this Plexure a glandulous substance is interwoven, as also a small part of the *Pia Mater*.

§ 3. This *Plexus Choroides* doth receive a small branch of the *Carotick Artery*, which pierces into the lower part of the *Brain*, which ends about the *Glandula Pinealis*, where it spreads its self up and down through the lower Surface of the *Ventricle*. § 4. It is joyned to the *Rete Mirabile*, and of the same use, with that wonderful Complexure.

XVII. Of the *Glandula Pinealis*, or *Pine-Apple* or *Nut*.

§ 1. It is called *Pinealis*, from resembling the *Pine-nut*, and is situated in the beginning of the hinder passage of the third *Ventricle*, which goes into the fourth or noble *Ventricle*. § 2. Its substance is hard and yellowish, and sometimes of a dark colour, covered with a thin *Membrane*. § 3. In old people it is very small, and scarcely apparent being as it were melted: so also in Men, whose *Brain* cannot be opened while they are warm, being as it were melted like *Salt* in a moist place. § 4. It is tyed as *Sylvius* has observed, by a little nervous string, between the *Testes*; who has also observed several times, certain grains of *Sand* to be contained therein. § 5. Its use is like that of other *Glandules*; chiefly to help the distribution of *Vessels* through the *Brain*, and to be as a *Valve* to the passage leading into the noble *Ventricle*.

XVIII. Of the method of Dissecting the *Brain*.

§ 1. This Method is threefold: First, according to the Antients

or the old way: Secondly, according to the new way: Thirdly, according to the famous *Franciscus Sylvius*. § 2. The method of Dissection the old way. First, a part of the *Brain* being removed, there appears the *Corpus Callosum*, the *Septum Lucidum* and the two extuberances upon which the *Ventricles* rest. Then the two *Ventricles* called the foremore, the *Fornix*, the *Plexus Choroides*, the third *Ventricle*, its two passages, the *Glandula Pinealis*, the *Nates*, *Testes*, the *Cerebellum*, the *Worm-like processes*, the noble *Ventricle*, the *Pelvis*, *Glandula Pituitaria*, and *Rete Mirabile*. § 3. The method of Dissecting the *Brain* the new way. In this new way of Section, after the Neck of the *Funnel* is shewed with the *Glandula*; the *Marrow* being lifted up; first of all the *Nates* and *Testes* are seen; then the passage into the noble *Ventricle*, afterwards divers *Nerves*, the *Ventricles* of the *Brain*, with the hole into the *Funnel*, the *Corpus Callosum*, the *Fornix*, the *Plexus Choroides*, and the *Glandula Pinealis*. § 4. The method of Dissection according to *Sylvius*. First, take off the *Skul* as deep as conveniently you can, then not meddling with the left side of the *Brain*, with its *Membrane*, begin dissection on the right side: first of all, cutting a sunder and removing the *Dura Mater*; then take away some *Particles* of the *Brain* with the *Pia Mater*, till you come to the *Cavity* of the *Ventricle*, which follow in both its upper and lower passage: Separate the *Limbus* with a blunt

Probe

Probe from the root of the Spinal Marrow; then removing the greatest part of the Brain, there appears the upper and lower Cavities of the Falx, as also the greater right side lateral Cavity, and the oblique descension of the upper Cavity thereinto. § 5. *The dissection of the left side.* The former things being done, enter upon the left side, wherein first, cut asunder the *Dura Mater*, which remove with the Falx, and gently remove the *Cerebrum* into the place of the right side, before removed, which as you are a doing, observe the Vessels going into the lateral Cavity, and how they spring up about the *Optic* Nerves, and are dispersed into many Ramifications, creeping every where up and down the inner substance of the Brain, especially into its winding or torcular Surface, till at length they terminate in the *Carotick* Arteries. After search out that eminent Chink between the Windings; and having cut the *Pia Mater*, open the sides thereof with a fit Instrument, that the branches of the *Carotides* may be the better appear, which run through the bottom of the Windings, and other new turnings. Then a wary Incision being made in the hinder part of the side, find out the larger Cavity of the Ventricle, which follow with your dissection to both ends; and turn back every way, the outward part of that which is dissected, the middle part being kept upright which rests upon the root of the Spinal Marrow, and is continued therewith. § 6. *Lastly, taking away the Brain,*

observe again all the Cavities more distinctly: And then when you have viewed the third Ventricle, the Funnel, the *Glandula pituitaria*, the several pairs of Nerves, after the usual manner; you may go back again to the *Glandula Pinealis*, *Anus*, *Testes*, *Nates*, *Cerebellum*, and its parts, in their due order. § 7. *The presenting of the Brain to view.* Clear the *Arteria Carotide* and Jugular Veins from the adjacent parts in the Neck, and bind them severally; then open one of the Arteries, and put in a crooked hollow Probe; and blow; so will the Vessels through the whole Brain swell, as being Ramifications of the afore said Arteries, until the Air with the forced Blood does empty it self into the Ventricles: And if by the afore said hollow Probe, you shall in like manner blow into the Ventricles, you will see their Continuation and Communion with the said Jugular Veins, by the distention of the said Veins. By this pleasant Speculation (saith *Bartholinus*) the Circulation of the Blood is not a little confirmed.

XIX. Of the Forehead.

§ 1. *Frons* (the Fore-head) so called à ferendo, from Carrying or bearing, because it carries in it the Image of the mind, consists of a part of the Skull, Muscles, Vessels Skin and scarf-skin. 2. *The Os Frontis* called also *Os Puppis*, *Coronale*, and *Inverecundum*, is double in Children, but in such as are of ripe age, it is but one. See it *Cap. 7. Sect. 4. § 3.* aforegoing. § 3. *The Muscles* (thought by *Riolanus* to be the *Orbiculares*) have

E e e e 3

straight

Straight Fibres, which Chyrurgeons ought to cut straight up or down, not Croß-ways, lest they destroy the lifting up of the Ey-brows; this is proved by Experience, Ocular Inspection, and Reason, for the Skin of the Forehead is by a strait motion either elevated or depressed, which can either be done by right Fibres, as Vesalius Laurentius, Baubinus, Platerus, Veslingus, and Bartholinus, do most truly affirm. See Cap. 6. sect. 3. & sect. 5. of this Book. § 4. But sometimes also there are two Muscles in the hinder part of the head, which move the skin thereof, which are short, thin and broad, with straight Fibres, ending above in a broad Tendon, and touching the hindmost Muscles of the Ears, in their sides: by these Muscles, such men can draw the skin of their heads backwards. § 5. As for Vessels, It has Veins from the External branch of the external Jugulars: Arteries it has from the Arteriae musculæ, and one of the Branches of the External Carotidæ: and Nerves from our fifth pair within the Skull but chiefly from the first and second pair, springing from the Vertebrae of the neck. § 6. The Cutis and Cuticula are common with other parts: But this is peculiar to the Skin of the Forehead, that it is moved, which is because it grows close to those Muscles, whereby both forehead and Ey-brows have motion.

XX. Of the Outward parts of the Eye.

§ 1. *Oculi, the Eyes, ab occultando, seu occultando, from shutting or hiding, or being hidden,*

as they are by the Ey-lids, are the Instruments of Seeing, composed of Muscles, Vessels, Membranes, humors, &c. § 2. They are in number two for the greater perfection of the sight. 1. That one may look a-side. 2. That if one be lost, to see by the other. 3. That one might see more distinctly & clearly. § 3. They are seated high in the upper part of the Face, in bony Sockets, covered with the Periostrion, that they might be as Watchmen, and also overlook and govern. § 4. Their figure is round, yet a little longish, like Bulbous-roots; making two Angles at the Sockets of the Eyes called Canthi; of which the greater and inner is at the Nose, the outward and lesser towards the Temples. § 5. The parts of the Eyes, are either external or internal. § 6. The external are the Ey-brows, The Ey-lids, and the Caruncles. § 7. Supercilia, the Ey-brows, (the Seat of Wrath, Disdain, and Pride) are framed of Skin, Muscle, Fat, and Hair. The Skin is thick, and hard, to hinder the immoderate growing of the Hair. The Hair, is oblique, the better to hinder things from falling into the Eye. § 8. Palpebræ, the Ey-lids, are complex Tunicles which cover the Eyes, and cleanse and purify the Tunica Cornea, and also by their overshadowing render the figures of things the more illustrious in the Retina as Averrhoes and Plempius affirm. They consist of Skin, Membrana Carnosa, Muscles, a Tunicle, the Tarsi, and Hairs, whence it is, that their substance is soft. The Skin and fleshy Membrane are very thin, and

and common with other parts
The Muscles are four. 1. *Frontalis* which lifts up the Eye-lid. 2. *Ciliaris primus*. 3. *Ciliaris secundus*. 4. *Orbicularis*, all which three shut the Ey-lids. These Muscles are cloathed with an inner Tunicle, exceeding thin and soft, lest they should hurt the Eyes which they touch. *The Tars*, which the Latins call *Cilia*, whereon the Hairs are fixed, being the extremities of the Ey-lids, are hard and cartilaginous, but soft like small Gristles, in figure Semi-circular. *Cilia*, the Hairs of the Eye-lids are formed to defend and help the Sight, that no small and light matters may fall into the Eyes, and that the Sight may be in some Measure directed by them: for *Galen* saith, That such as have them fallen or pulled off, can hardly discern things afar off, especially if they be of a dark colour. § 9. *Caruncula*, called also *Caruncula Lachrymalis*, the Glandule or fleshy Kernel in the greater corner of the Eye, is that which contains an humidity to moisten the Eye withal, and is placed over an hole made in the Bone of the Nose, called *Punctum Lachrymale*, to keep us from continually weeping.

XXI. Of the Tunicles of the Ey.

§ 1. *The Membranes or Tunicles of the Eye* are either common or proper. § 2. The common is but one only, called *Tunica Adnata*, or *Conjunctiva*, and by some *Tunica Alba*, which is smooth and thin, and arises from the *Pericranium*. § 3. It is called *Conjunctiva* or *Adnata*, because it firmly cleaveth to the Eye, and keeps it within its

Orbita, that it might not start forth in violent motions, covering the half of the Eye orbicularly. § 4. But some say, That it arises from the *Periosteum*, and ends at the Circle of the Iris, after it has communicated a Tunicle to the Eye-lid: this *Adnata* is the outwardmost Tunicle of all, next the Bone, and is called by *Hippocrates*, *Alba*, the White of the Eye. § 5. Its use is to fasten the Eye to its Socket and inner Bones, like a Ligament. § 6. Its sense is exquisite, and this Tunicle is furnished with very many little Veins and Arteries, which appear not, but in an afflux of humors, for then they swell, and appear very red, as in an *Ophthalmia*, which is seated here. § 7. The proper Tunicles are four, viz. 1. The *Sclerotica*, or *Cornea*, the horney Tunicle, (because in firmness, smoothness, brightness and transparency, it is like a Lanthorn-horn) 2. The *Choroides*, or *Uvea*, because it is like the Chorion, or by reason it is of the colour of a Grape. 3. The *Retina*, or *Arnea*, called by some *Crystalloides* or *Crystallini*, The Net-fashioned Coat, or Looking-glass. 4. The *Vitreum*, which covers the glassy-humor. § 8. The description of the *Sclerotica*: The *Adnata* being removed this first offers it self to sight, arising from the *Dura Mater*. In the hinder part it is thicker and darker, stretched out, and equal: The forepart of this Tunicle is called *Cornea*, which is polished, thinner, brighter and transparent, but may be scaled into 4 plates, over which the *Epidermis* is placed, involving

the whole forepart of the Eye. This *Sclerotica* cleaves to the *Choroides* in the hinder part, but is joyned with the *Crystallina* in the middle, that it may separate the *Aqueous* and *Vitreous* humors.

§ 9. *The description of the Choroides.* It has Vessels sprinkled up and down, and arises from the *Pia Mater*, being from its first beginning blackish, chiefly within, that the *Idea's* received in a dark place might be the more illustrious: under the transparent *Cornea* it is in men sometimes of an *Azur* colour, sometimes *Blew* or *Grey*, which various colours are seen through the *Cornea*. This *Tunicle* in its forepart is called *Uvea*, by reason it is of the colour of a Grape, in which place it is thick and doubled. It is (saith *Bartholinus*) moveable, and according to the diversity of the object or light, it is contracted or dilated, the which you may apparently see in Cats. This *Uvea* is bored through in the middle, to let in the species or representations of visible objects, in which perforation is formed the *Pupilla* or sight of the Eye, which in humane kind is round. In the Verge of the *Uvea* are variety of colors, from whence arises the *Iris*, a Circle so called, which, although *Galen*, *Cassorius*, and *Riolanus* say, is six-fold, yet *Plempius* has proved it to be only threefold, viz. a double narrow one at the White of the Eye, and a third at the *Pupilla*, which is true and larger, and confirmed with a constant colour. This Circle is seen of many colours, but where it constitutes the prin-

cipal part of the *Iris*, it is sometimes *Azure* colored, fiery, brown, grey, black, &c. From the compass of the *Uvea*, where its duplicated Membrane reclines to the *Crystalline*, arises the *Ligamentum Ciliare*, which are certain thin Filaments, proceeding out of the *Uvea*, representing the black lines of the Eye-lids, like Hairs: this *Ligament* compasses the *Crystalline* humor, by the help whereof, the said humor is joyned to the adjacent parts. The use of this *Ligament* according to *Cartesius* is to move the *Crystalline* according to the various necessities of sight.

§ 10. *The description of the Retina.* This the Greeks call *Amphiblestroides* the Net-like *Tunicle*, which arises from the inner substance, or marrowy part of the Brain: *Barbet* saith, rather from the *Optick Nerve*; It covers the *Vitreous* humor, and *Vitreous Coat* like a Net, being exceeding thin, but more dark than lightsome, mixt with an obscure redness; but it is a little bedewed with a slimy humor, (which causes it to be sometimes white) for the illustration of the representation received. Its figure is Semi-circular like a Mitre, and its sides are near the *Crystalline* for the distinct representation of the Species. This *Tunicle* proceeding farther becomes the *Aranæa* or *Crystallina*, the proper *Tunicle* of the *Crystalline* humor, which cloaths the fore and hinder parts thereof, being white, most thin, and transparent.

§ 11. *The description of the Vitrea.*

This

This covers the vitreous or glassy humor on all sides, that it might not run about, and separates it from the Crystalline humor. It is exceeding thin, white, and smooth, which encompasses the humor like a thin Skin, not only in the convex part of the said humor, but in the Concave part thereof, where it admits the Crystalline, and indeed cleaves close to the Crystalline Coat: It is furnished with many very little Veins; and to its Center is joynd the inward marrowy substance of the Optick Nerve. Its figure is like that of the vitreous humor, Concave before, and large and convex behind.

XXII. Of the humors of the Eye, and of its other parts.

§ 1. The humors of the Eye are threefold, viz. the Aqueous, the Vitreous, and the Crystalline, which last is the most noble of the three. § 2. The description of the Aqueous humor. It is so called because it runs like Water: It has no Tunicle, but only fills the Cavity between the Carnea and forepart of the Crystalline humor, compassing also the Vitreous humor, for if the Eye be cut behind, it will run out as well as before; Riolan saith, That all of it is contained within the whole Uvea Tunica. This humor is not animated, but seems only to be excrementitious after the nutrition of the Crystalline humor; and this may well be supposed, because it is both lost in Wounds of the Eyes, and consumed in Diseases, and breeds afterwards again. It is kept together by some small Thread-like substan-

ces, or texture of Filaments (called *Tunica Ciliaris*, but improperly, being black, and like to the Hairs of the Eye-lids;) This *Tunica Ciliaris*, or *Ligamentum*, is under the Circle of the Uvea, and here a Cataract or Suffusion grows. The use of this Aqueous humor is, to preserve the adjacent parts from dryness, and to magnify the Species represented, being diminished in the Pupa or Apple of the Eye. § 3. The description of the Vitreous humor. It resembles molten Glass, and is placed behind, that if any thing should escape the Crystalline humor, it might be stayed there, and not return to the Uvea. It is twice as big as the Aqueous humor, and five times as great as the Crystalline humor, the which it receives as a Pillow, and therefore is softer than it. It is plain before, concave in the middle, and round behind. It is stopped in by some Filaments, which being cut, the Vitreous humor runs out like water. Its use is to prepare and communicate nourishment to the Crystalline humor; and, as Plazzerus saith, to fill up a necessary space, between the Crystallina, and Retina: Or, that the Vitreous humor may give the Species a passage to the Retina, and refract them from Perpendiculars. § 4. The description of the Crystalline humor. It is so called because it resembles the Crystal stone, or Ice. It is of a compact and wackerish substance; plain before, that it might be large enough to receive the visible Species; and round behind, where it sticks in the

the *Vitreous* humor, and causeth every thing to appear bigger. It is seated not in the middle of the Eye, but near to the *Pupilla*. It hath an exceeding bright and shining color, as being free from all other colors, by which means, it receives all kind of colors into its shining property. Its substance is indifferently hard; but its form is variously changed, according to the various affections and dispositions of the Eye. Its use is to be the cheif *Medium* of the sight.

Of the other parts of the Eye.

§ 5. The other parts of the Eye, are the Fat, Muscles, and Vessels.

§ 6. The Fat is placed between the Muscles and several Vessels, to heat, moisten, and help the motion of the Eye; as also to make it round and even.

§ 7. The Muscles of the Eyes are six pair: of which the first four are straight: the later two oblique, and are called the *Lovers* Muscles, viz. 1. *Attolens* or *Superbus*, the Proud. 2. *Deprimens* or *Jumilis*, the humble. 3. *Adducens*, or *Lectorius*, the reading Muscle. 4. *Abducens*, or disdainful Muscle. 5. *Obliquus externus*, or *Trochlearis*, the Pulley Muscle. 6. *Obliquus internus*, the lesser or inferior Muscle: Their descriptions see cap. 6. sect. 4. § 3, 4, 5, 6, 8, and 9. aforegoing.

§ 8. The Vessels of the Eyes are, first, Veins, of which the external proceed from the external Jugulars, the internal from the *Plexus choroides*. Secondly, Arteries, of which the External spring from the External *Crotida*, or Soporals the in-

ternal, from the *Rete Mirabile*. Thirdly, Nerves, which are in number two for each Eye; one is for Motion, called *Motoryus*; the other for sight called *Visorius*, of which, this latter is the softer.

§ 9. The first or moving pair, go into the Tunicles, and send a little branch into every Muscle: The second or optick pair, are thick and porous, and carry from the Brain the visive spirit and faculty, by which the visible species of things are also conveyed to the Brain: this is inserted behind into the Center of the *Tunica Cornea*, to which from the hard Tunicle, or external Membrane, it communicates a Coat, and so passes more inward to the Center of the *Retina*, into which its marrowy substance is spread abroad; to which sometimes a Portion of the *Tunica Vitrea* adheres.

XXIII. Of the outward parts of the Ear.

§ 1. The Instrument of Hearing, to wit, the Ears, are in number two, one on each side; and are either external or internal.

§ 2. The external Ear (called *Auricula*) is in humane kind, of a Semi-circular form, convex without, and concave within, Cartilaginous, and joyned to the Bone of the Temples. § 3. Its upper part is called *Ala*, and by some *Pinna*, being the broader: its lower part is soft and hanging down, and is called *Fibra*, *Auricula infima*, *Lobus*: Its outward circumference is called *Helix*, also *Careolus*, from its wreathed form; its inward part, opposite to the former is called *Anchelix* or *Scapha*: In its middle it has a large Cavity

Cavity (the cheif part of the external Ear) which is called *Concha*: its lesser Cavity (near the *Meatus Auditorius*) where the Ear-wax is bred is called *Alvearium*: towards the Temples there is a kind of covering, on which Hair grows, which is therefore called *Hircus*, the Goat. § 4. The parts of the Auricula are either common or proper. § 5. The common are the *Cuticula*, *Cutis*, *Membrana nervosa*, *flesh*, and a little *Fat*. The Skin is thin, cleaving to a very little flesh, which is tyed to the Cartilage, by a nervous Membrane, which is very sensible, by the Sence whereof it is, that if cold water is sprinkled on the Lobe or Lappet of the Ear, the whole Body is cool'd thereby: the Lobe is so mingld with flesh, & a little fat that it becomes spongy, and so seems fleshy and fatty. § 6. The proper parts are the *Muscles*, *Veins*, *Arteries*, *Nerves*, and the *Cartilaginous substance*. § 7. The *Muscles* are four, 1. *Quadratus*, *deprimens*, *deorsum trahens*, which pulls the Ear down, 2. *Antrosum ducens*, which moves the Ear forwards. 3. *Retrorsum ducens*, *Abducens ad posteriora*, which pulls it backwards. 4. *Tripartitus*, *Attolens*, which lifts the Ear up: of these the first three are common with other parts, the fourth only is proper to the Ears. See cap. 6. sect. 7. § 3, 4, 5, 6. foregoing. § 8. *Veins* it receives from the external *Jugular*: *Arteries* from the external *Carotide* or *Soporal*: *Nerves* from the second pair of the Neck called *Cervicale*, as also from Our eighth pair of the Brain. § 9. The *Car-*

tilage or *Gristle* is tyed to the *Ossipetrosum* by a strong *Ligament*, which spring from the *Pericranium* to hold it up. § 10. To these parts you may add certain *Glandules*, which are thick and large, called *Parotides*; (which Word also signifies the Swellings of those Kernels.) These are placed not only behind the Ears, but on both sides, and under the Ear, yet not above, and are called the *Emunctories* of the Brain, receiving *Excrements* therefrom. Besides these there are many other *Glandules* or *Kernels*, in the whole space under the lower Jaw, (in which many Diseases are bred, chiefly the *Scrophulæ* or *Kings-Evil*;) whose use is to moisten the parts, and to help in the division and passage of the *Vessels*. § 11. The use of the Auricula is, first for *Ornament* and *Beauty*: Secondly, to help the receiving of *Sounds* the more readily; by gathering them, when they are scattred in the Air, into the Cavity of the Ear, that they may come to the Drum without violence, being first moderated in the hollow and winding passages: the *Auricula* is but an Assistant to the Organ of Hearing, which lyes within, as does that of Swelling. And as the Nose being cut off, a man can Smell but imperfectly, So if the Ears be cut off close to ones Head, the Hearing is dull and confused with a murmuring Noise, so that Articulate Words seem only as the Noise of many Waters, which they who have lost their Ears well know; and if one Ear is cut off, the Hearing of the other

is hurt, unless the hole of the cut Ear be first stoppt.

XXIV. Of the inward parts of the Ear.

§ 1. The parts contained in the internal Ear, or in the Os Petrosum, are the Cavities, the Muscles, the Bones, the Vessels, and the Inbred Air. § 2. The Cavities are either common or proper. § 3. The common is but one, which is the Meatus Auditorius; it is called common, because it belongs equally to both the external and internal Ear. This passage is always open, having windings lest Air should too hastily rush in upon the Tympanum; it is oblique, to abate the vehemency of a sound; it runs upwards, that if any thing sho'd fall in't, it might the more easily fall out; it ends at the Tympanum, and contains the Cerumen or Ear-Wax, an Excrement purged from the Brain, by which Insects are hindred from creeping in. § 4. The Tympanum or Drum, is a little strong Membrane: it is little, by reason of its situation: it is strong, that it might the better endure external injuries: it is very dry, that it might give the better Sound: it is thin and clear, that the Sounds may be the more readily sent to the internal Air: it has a Chord for strength and stretching of it, even as the military Drum hath. If this Membrane be thick from the Birth, it causes an incurable Deafness: so also if it be covered without, with another Membrane; and if this happens from the Birth, such persons are for the most part Dumb, because they cannot conceive in their Mind, nor utter

with their Tongue, such Words as they never heard: If Pus, or a viscous matter, stick to it within, or a thick humor flow thereto, it causes a deafness or thicknes of Hearing incurable; if a thin humor flows thereto, it causes a ringing and noise in the Ear. It is nervous, and of exquisite sense, and being hurt or corroded causes thicknes of Hearing, as they who have it weakned by the noise of Bells or Great Guns can tell. In form it is orbicular, compassed with a boney Circle, it is called *uvula*, *Myrinx*, or *Sextum Membrani*, *mediastinu*, *Tympanu* & *Tympani Membranula*, it is stretched before the internal Cavity, containing the Congenit Air, nor much unlike the Vellum on the Head of a Drum: *Cassorius* will have it to spring from the *Pericranium*, but *Veslingus*, from the *Perostrion*, which is indeed the more probable. Its use is to shut the passage of Hearing, and to separate the inbred Air, from that which is external, and to keep it within, as also to preserve it from water, dust, and other external injuries. § 5. The proper Cavities are in number three, viz. the Tympanum, the Labyrinth, and the Cochlea: the descriptions of all these you may see at large in cap. 7. sect. 4. § 6. near the latter end thereof. § 6. The Muscles are in number two, viz. the externus, which is joyned to the Meatus Auditorius, and the internus, which is joyned to the Malleolus: see their description in cap. 6. sect. 7. § 7, and 8. a^o foregoing. § 7. The Bones are in number four, viz. 1. the Malleolus

leolus or little Hammer. 2) *In-*
cus, or the Anvil. 3. *Stapes* or
 the Stirrop. 4. *Os Orbiculare*, or
 the Orbicular Bone: the de-
 scription of all these you have
 in cap. 7. sect. 9. § 3, 4, 5, and 6.
 of this Book. § 3. For Vessels
 there is first a small gristly passage
 which goes from the *Concha* of the
 Ear, near the sides of the *Ptery-*
goidean process to the *Palate*: its
 use is first, to purge the inbred
 Air, for by this passage excre-
 ments pass from the Ear into the
 Mouth, but not back again, be-
 cause there is a certain Valve
 which hinders: hence it is that
Masticatories help much in Di-
 seases of the Ears. Secondly, to
 convey Sounds into deaf and
 stopped Ears. § 9. Second-
 ly, it has a Nerve from our eighth
 pair of the Brain or *Nervus*
Auditorius, which enters the Ear
 through the *Os Petrosum*: it tou-
 ches the *Cochlea* and the *Labyrinth*
 with a double branch, that it
 may in both places perfect the
 Hearing: to these add a branch
 cleft in two, proceeding from
 our sixth pair, which is to move
 the Muscles. § 10. The Inbred Air
 is placed in an internal Cavity, in
 the Bone, within the *Tympanum*:
 it is pure, subtil, and immovea-
 ble, and the internal Medium of
 Hearing. It is called *innate*,
inbred, *congenit*, and *complanted*
 Air, because it is planted in the
 Ears at the first formation.
 § 11. How the Hearing is caused.
 The external Air passing
 through the *Meatus Auditorius*,
 gently beats upon the *Tympanum*,
 which being shaken, shakes the
 little Bones joyned to it; then

the *Idea* of the Sound is impres-
 sed into the inbred Air, which
 having the quantity of the
 Sound, circulated through the
 Windings of the *Labyrinth* to
 make it purer, is conveyed by the
Cochlea, and delivered to the *Au-*
ditory Nerve, that the Animal
 Spirit may present the *Idea's* to
 common sense, which is the judg-
 of every Species.

XXV. Of the Nose.

§ 1. The Nose, the instrument of
 Smelling, is divided as the Ear in
 parts external and internal. § 2:
 The external part is divided into
 upper and lower: the upper part
 is boney and immoveable, and
 its acuminate part is called
Spina, or the Ridg of the Nose:
 the lower part is gristly and
 moveable, the extremity where-
 of is called *Pyrula*, and *Orbiculus*:
 the lateral parts or sides thereof
 are called *Pterugia ala*, and *Pina-*
na: the fleshy part sticking out
 in the middle near the Lips is
 called *Columna*, the Pillar. § 3.
 Within it is divided by a *Septum*
 into two holes called *Nares*, the
Nostrils, that if the one should be
 stoppt, the other might let the Air
 in and out. Each of these holes
 or each Nostril is again divided
 about the middle of the Nose
 into two parts, viz. into that
 which ascends to the *Os Ethmoi-*
des or *Spongiosum*; and into that
 which descends above the *Pal-*
late into the farther part of the
 Mouth, and the Throat: Hence
 it is, that Drink comes sometimes
 out at the Nostrils; and things
 being put into the Nostrils, the
 Nose being stoppt, often slip into
 the Mouth; also excrements of
 the

the Brain, while they are carried downward to the Nostrils, often come into the Mouth, or are brought thither by Hawking and Coughing. § 4. *Its situation is high, and between the Eyes, which is partly for beauties sake, and partly, because it is the Nature of all Smells to ascend upwards.* § 5. *Its magnitude and figure varies, for some have great, others little Noses; some Hawks and Roman Noses, others saddle or flat Noses.* § 6. *Its substance consists of the Cuticula, Cutis, Muscles, Bones, Cartilages, Vessels, and Tunicles.* § 7. *The Cuticula and Cutis, agree with the parts adjacent, and stick so fast to the Muscles and Cartilages, that they cannot be separated without rending.* § 8. *The Muscles are eight, or four pair, viz. 1. 2. Dilatantes, which dilate the Nostrils. 3. 4. Aperientes, which open or erect the Nostrils, but these two are only found in such as have great Noses. 5. 6. Constringentes, which pull the Nostrils together. 7. 8. Deprimentes, which depress the Nose: See their descriptions in cap. 6. sect. 8. § 2. 3. 4. and 5. foregoing.* § 9. *The Bones are two (but in such as are perfectly grown but one) called *Dorsum nasi*, which constitute the boney and upper part of the Nose.* § 10. *The Cartilages or Gristles, which make up the substance of the lower part of the Nose, are in number five, and are moved by the Muscles. The two uppermost being broad ones, stick to the Bones of the Nose, and make the one half of the *Alæ*; by these are placed the other two, which*

constitute the other half of the *Alæ* or *Pinna*, and are tyed together by membranous Ligaments: these Gristles the more they descend, the softer they grow, so that the end of the Nostrils, are partly Cartilaginous and partly Ligamental. The fifth, is placed in the middle of the former, and constitutes the *Septum Nasi*, or partition Wall, by which the Nostrils are divided. § 11. *As for Vessels, it has Veins from the external Jugulars: Arteries from the Carotiaes or Soporals: And Nerves from our fourth pair of the Brain, on each side one; these go through the holes common to the Eyes and Nose, at the greater corner, into the Tunicle of the Nose, the Muscles, and the Pallate.* § 12. *The Tunicle which cloaths the Nostrils, springs from the Dura Mater, and is common to the Mouth, Pallat, Tongue, Larynx, Gullet, and Stomach: but in the Nostrils it is thinner and of exquisite Sense, as may be perceived in Sneezing: it is filled with many little holes, which go into the *Os Ethmoides*. The Bone it self is covered with the *Periostrion*.* § 13. *The Internal parts of the Nose are a Membrane, Bones, Nerve's, the Mammillary processes, and the spongy flesh.* § 14. *The Membrane is the same with that last described, and proceeds from the Dura Mater.* § 15. *The Bones are chiefly the Ethmoides, or Cribriform, and the Vomer, which holds up the Bridg of the Nose: See them cap. 7. sect. 4. § 8. and § 5. § 7. of this Book.* § 16. *The Nerves proceed from our first pair within the Brain, which administer to the Sense of Smelling, & adhere to the Mam-*

milary processes. See cap. 5. sect.

2. § 1. where they are largely described. § 17. The Mammillary processes, called Papillares, or Teat-like productions are two in number, joyned to the aforesaid Nerves, and are white, soft, broad, longish, and in mankind thin, and small; ordained to be the true Organs of Smelling, and not the Nose, nor its Coat: They are certain knobs in the Cerebrum or Brain, and placed in the forepart thereof, behind the Colander Bone, and are covered with the Dura Meninx, receiving the force of all odours and scents through the perforations of the said Bone.

§ 18. The spongy flesh, is placed as Riolanus saith, Within the Cavities of the Nostrils; there are many of them, (Barbet calls them Caruncles) of a reddish colour, with which the holes of the Ethmoides, or spongy Bones are filled, that the Pus or Snivel might not voluntary distil forth: from these Caruncles being swelled, the Disease called Polypus, or Noli me tangere is said to be bred. § 19. The use of the Nose is, first, to convey Air to the Brain for the Generation of the Animal Spirits. Secondly, To convey Air to the Lungs for cooling the Heart, and generation of vital Spirits. Thirdly, to convey the Scents to the processus Mammillares, which lye concealed above the Os Cribriformum; and therefore it is, that those who have lost their Noses at the roots smell not at all. or but very badly. Fourthly, That thereby the Brain may be discharged of Excrements. Fifthly, to be a help to the Voice.

Sixthly, to be an ornament to the Face. Seventhly, by lifting it self up in frowning to express Anger; for so its name in Hebrew signifies.

XXVI. Of the containing parts of the Mouth, as Cheeks, Lips and Jaws.

§ 1. Os, the Mouth, is the passage of the Air we receive in or let out: the passage of nutriment and stomatick Excrements; and in part the framer of the Voice.

§ 2. The parts of the Mouth are either external and containing: Or, internal and contained. § 3. The external and containing are chiefly the Lips, Cheeks, and Jaws. § 4. The internal and contained are chiefly the Gums and Pallate; The Uvula, the Pharynx, and the Tongue. § 5. The Lips and Cheeks are made of Skin, Flesh, and Muscles: The Skin is covered with the Scarf-Skin, and sticks close to the flesh and Muscles: But the whole inner Capacity of the Mouth is cloathed with a thick Coat, which goes also about the Gums and Lips; which is thought to be doubled when it constitutes the Uvula, this Coat is common to the Stomach also; and hence it is that the lower Lip trembles in such as are ready to Vomit.

§ 6. The flesh is of a soft and spongy kind, whose Skin is so mingled with the Muscles, that it seems as if it were a musculous Skin, or skinny Muscle. § 7. The Muscles are eight pair, first, common to the Lips and Cheeks, viz. 1. Zigomaticus or Quadratus detrahens, the Muscle drawing backwards. 2. Buccinator, the Cheek-driver, or Trumpeters Muscle, Secondly,

ly, proper only to the upper Lip, viz. I. *Sursum Trabens*, or *Attolens*, which draws it upwards. 2. *Deorsum movens*, which moves it downwards. Thirdly, proper only to the lower Lip, viz. *Deorsum Trabens*, which pulls it downwards. Fourthly, common to both Lips, 1. *Oblique Sursum trahens*, which draws obliquely upwards. 2. *Oblique deorsum trahens*, which draws them obliquely downwards. 3. *Sphincter Oris*, *Constrictor*, or *Orbicularis*, which goes round and purses the Mouth together. See cap. 6. sect. 9. where they are largely described. § 8. *The Jaws consist of Muscles and Bones.* § 9. *The upper Jaw has no proper Muscles, because it is not moved; but it has eleven Bones, five on each side, and one without a Fellow; which is five pair, and one odd one.* § 10. *The I. pair is Os Zygomaticum, the Cheek-bone, which makes the lower part of the Orbit of the Eye, constituting with its Apophysis, the Os Jugale or Zygoma.* *The II. pair is Os Lachrymale, which makes the internal Corners of the Eye, having a large Orifice descending to the Nose.* *The III. pair is Os Maxillare, or Jaw-bone particularly so called, which is the greatest of all the Bones constituting the Jaw.* *The IV. pair is Os Nasi, or Bone of the Nose, which hath in its end five united Cartilages.* *The V. pair is Os Palati, the Bone of the Palate; The odd Bone, called Vomer, is a peculiar Bone above the Palate, which supports the Interstice of the Nose, and is joyned to it by Harmony.* See them more at

large in cap. 7. sect. 5. § 2, 3, 4, 5, 6. and 7. foregoing. § 11. *The lower Jaw has but one Bone, whose description see in cap. 7. sect. 8. of this Book: but it has six pair of Muscles, viz. I. Crotaphites, or Temporalis, the Temporal Muscle, which has this peculiar to itself, that it is covered by the Pericranium, by reason of which, the subjacent Temporal Bones are altogether destitute of it, which is not observable in any other part, as we have hinted in sect. 3. § 3. of this Chapter.* II. *Masseter, Mollitor, Mandibularis, Lateralis, Mansorius primus, the chief Chewing Muscle.* III. *Pterygoideus externus, Alare externi, Alariforme externum, which thrusts out, or brings the Jaw outward or forwards.* IV. *Pterygoideus internus, Alaris internus, Mansorius alter, Masseter internus, the other, or internal Chewer, which draws the Jaw upwards and backwards.* V. *Graphyoides, Digastricus, Musculus Latius, which draws the Jaws downwards to open the Mouth.* VI. *Musculus Latius (properly so called) or Deprimens, which draws also the Jaw downwards.* This is the broadest Muscle, and is called also *Musculus Quadratus*. See their description at large in cap. 6. sect. 10. § 2, 3, 4, 5, 6, and 7. of this Book. § 12. *The uses of the Lips are, first, to defend the internal parts from cold, and external injuries: Secondly, to keep in the Food in Eating: Thirdly, to help the Voice in Speaking. Fourthly, to cast forth the Spittle in Spitting: Fifthly, for Ornament.* § 13. *The use of the Mouth is, first, To receive in and let out Air*

Secondly, to be a passage for the Meat and Drink : Thirdly, to exclude the Excrements of the Lungs, Head, and Stomach : Fourthly, To be the Organ of Speech. § 12. Of these containing parts of the Mouth, those parts of the Cheeks which are blown up, as in Trumpetting, are called *Buccae* the Cheeks : the upper part of the Lip is called *Mystax* : the hollowness under the Nose which divides the Lip in the middle is called *Philtrum* : the outward parts of the Lips which hang over, are called *Prolabia* : the lower part under the lower Lip, is called *Mentum*, the Chin : and the fleshy part under the Chin, is called *Buccula*.

XXVII. Of the Gums and Pallate.

§ 1. *Gingiva*, the Gums are hard, fleshy Substances, destitute of Motion, which serve for keeping the Teeth in their Sockets : if they be eaten away or too much relaxed or over-dried, the teeth become loose, or fall out. § 2. In the Gums are placed the Teeth, which in men are for the most part 32 ; in women 28. Their Cavities are clothed with a membrane of Exquisite sense, whence pains of the Teeth are so vehement, and they have Nerves also from Our first and fifth Pair. § 3. *Palatum*, the Palate or Roof of the Mouth ; is moderately Concave or hollow, being a kind of a Vaulted arch, not much unlike the roof of an house, so formed, that the Air being repercussed, the Voice might be the stronger. § 4. It is the Basis on which the Brain rests, being made of the *Os Sphenoidale* ; and is invested with a thick

coat arising from the *Dura Mater*, which covers the Cheeks, and whole mouth on the inside ; being common to the Gullet and Stomach, whence comes a consent between those Parts. § 5. This Tunicle is wrinkled and rough, that the white, hard Membrane might the more firmly cleave to the bone, and keep the meat together, while it is a chewing ; tis furnished with small nerves for sense.

XXVIII. Of the Uvula, Columnna, or Gargareon.

§ 1. The Uvula is a process made of a glandulous, spongy, and red Substance, supported by *Columbus* to be made of the Reduplication of the Tunicle of the Palate, but by *Riolanus* to be the Off-spring of certain Muscles. § 2. Its figure is roundish long, and almost Pyramidal : Its suspended by two ligaments, held up by two pair of little Muscles, viz. *Ptery-staphylinus externus*, arising from the upper Jaw ; and *Ptery-staphylinus internus*, arising from the lower part of the internal wing of the *Pterygoideus*. § 3. The two Ligaments are broad, fastning the Uvula on both sides, like to wings spread out, called by the Arabians *Galsamach*. § 4. It is seated at the farther part of the mouth, near the passages of the nostrils ; having a suspension from the extremity of the Palate, over the chink of the *Larynx* between the *Amygdalæ* or *Tonsilæ*. § 5. Its use is, first, to hinder drink or other liquid things, from passing out of the Mouth into the Nostrils : Secondly, to temper the coldness of the Air, and that it might not too swiftly rush into the Lungs.

for those that have lost their *Uvula*, commonly dye of a Consumption.

XXIX. Of the Pharynx or Fauces.

§ 1. The Pharynx or Fauces is the hinder and lower part of the Mouth, which cannot be seen, unless the mouth is opened wide, and the Tongue held down: Or, it is the beginning & mouth of the Gullet, as the *Larynx* is of the *Aspera arteria* or Wind pipe. § 2. It is called Pharynx from φάγω, because it conveys the Meat and drink into the Stomach. § 3. Its substance is fleshy, and performs its attractive motion by streight Fibres, but its expulsive by such as are orbicular. § 4. In the Pharynx is placed the *Os Hyoides* or *Hypsiloides*, so called from the form of the Greek letter υ, also *Lambdoides* from the Greek Λ: by some it is called *Os gutturis*, and *Os lingue*, the Throat or Tongue-bone, which is tyed by the assistance of Muscles and Ligaments, to the Sharp process of the Temporal Bones, and to the Buckler-like Cartilage of the *Larynx*. See the Description thereof in Cap. 7. sect. 8. § 2, 3, & 4. of this Book. § 5. To it belong four Cartilages, two somewhat great, long and round, in the Belly of the *Os Hyoides*; and two lesser adjacent to the Horns, which in some men become bony. § 6. This bone is not moved except the Tongue be moved, and then its motion is performed by 4 pair of Muscles, viz. I. *Sternohyoides*, moving it directly downwards. II. *Geniohyoides*, raising it directly upwards. III. *Stylohyoides*, obliquely bringing it upwards. IV. *Coracohyoides*, obliquely drawing

it downwards. See their Descriptions in Cap. 6. Sect. 11. § 2, 3, 4 & 5. of this Book. § 7. The Use of this Bone are, first, to keep the throat open as nature requires: Secondly, to be the Basis of the Tongue, lest it should perpetually hang in the Throat, and hinder swallowing. Thirdly, To be the root from whence many Muscles of Tongue and *Larynx* might arise.

XXX. Of the Tongue.

I. *Lingua*, The Tongue, so called à *Lingendo*, from Licking, is placed in the mouth, under the Roof of the *Pallate* thereof. § 2. In number it is but One; in Sea-Calves, two in Lizards and Snakes it is divided into two Parts; in Serpents it is divided into Three. § 3. Its figure is broad, long, and thick, partly oval partly Pyramidal; thicker at the root, thinner and sharper at the end. § 4. It consists of skin, flesh, ligaments, vessels and muscles; being the Organ of Taste, and a peculiar kind of Substance. § 5. The Skin that covers it is of an exquisite sense, and proceeds from the *Dura Mater*; being commonly thin, soft and porous, that taste may the more easily pierce into the Tongue; but it is many times hard in such as often swallow hot Liquors. § 6. The flesh (is no muscle because it has no fibres, nor moves any other part, but is moved by muscles: but it) is of a special kind, soft, loose, rare, and spongy, that it might imbibe the Savors of things brought to it; Towards the basis thereof it is glandulous. § 7. As to its magnitude, if it be too great, it makes one so lisp and stutter; if

if it be too short soft and moist, it hinders one for speaking plainly. § 8. As to its Connexion, it is tyed in its hinder part to the Larynx and Os hyoides; as also to the Pharynx and Amygdalæ: underneath, in the middle of its body, its tyed to the lower part of the mouth with a strong Ligament. § 9. This Ligament is membranous for strength and stability sake, as also for the Insertion of its proper Muscles, whose Extremity is called *Frænum*, and *Tranquilum*, by which Nature shews, that Moderation is to be used in the use of this part: if it be extended to the Tip of the Tongue, it hinders sucking, and the child is said to be *Tongue-tied*: Midwives often tear this with their Nail, which many times proves of very evil consequences; or if it be torn into any of the Glandules adjacent, a wound is made, which will never be healed; it ought to be cut (when need requires) with a small knife or a sharp pair of Sissers. There is another Ligament (so esteemed by some) which is a certain white line called by Hippocrates, *Mediana*, which distinguishes the Tongue, in the middle of its surface, into a right and left part: by means of which in a Palsy of one side of the Body, that side of the Tongue may become Paralytick, the other side being free. § 10. As to Vessels, it has Veins called *Ranulares*, and *Saninæ*, which arise from the external Jugulars, and are to be seen under the Tongue: these are commonly opened in Quinsy, diseases of the Pharynx, Amygdalæ; madness, &c. To these

two Arteries answer, which proceed from the *Carotides*, or *Sopra-rials*. Nerves also it has, both for Motion and Sense, springing from our fifth, sixth, ninth, and tenth pairs of the Brain: of these a thinner pairs run through the Surface or Coat of the Tongue, from our fifth and sixth pairs aforesaid: but a thicker through the inward parts, from our ninth and tenth pairs aforesaid: These being obstructed, the Taste (according to Columbus) is lost. § 11. The Muscles are in number ten, or five pair. I. *Styloglossus*, which draws the Tongue inwards and upwards. II. *Myloglossus*, which moves the Tongue obliquely upwards. III. *Genioglossus*, which brings the Tongue forwards, or thrusts it out. IV. *Basoglossus*, or *Hypoglossus*, which draws the Tongue directly inwards. V. *Ceratoglossus*, which pulls it downwards. See their description in cap. 6. sect. 12. § 2, 3, 4, 5, and 6. aforesaid. § 12. To these some would add an eleventh Muscle, but it is no Muscle, because it consists not of fleshy Fibres: it is only flesh consisting of very many Glandules and much Fat, placed at the root of the Tongue, and appearing when the aforesaid Muscles are taken off; whose peculiar use is to keep the Tongue moist with *Lympha* or *Spittle*. § 13. The use of the Tongue is, 1. To be the Instrument of Tasting. 2. To be the Instrument of speaking. 3. To help in the Chewing of the Food, by turning it to and fro. 4. To Lick with, from whence in Latin it is called *Lingua*, à *Lingendo*, from Licking, as aforesaid.

C H A P. XI.

Of the LIMBS or JOYNTS.

I. *Of the Shoulder or Arm:*

§ 1. By the Limbs or Joynts, we intend first, the Shoulder or Arm: Secondly, the Cubit or Elbow: Thirdly, the Wrist: Fourthly, the Hand and Fingers: Fifthly, the Thighs: Sixthly, The Legs: Seventhly, the Anckles and Instep: Eighthly, the Foot and Toes. § 2. These Limbs are made up of the Cuticula, or Scarf-Skin, the Skin, the fatty Membrane, the flesh of Muscles, Veins, Arteries, Nerves, Ligaments, Cartilages, and Glandules or Kernels. § 3. The parts containing are, the Cuticula Cutis, fatty Membrane, and the common Membrane of the Muscles: all the other parts are contained as being comprehended by these. § 4. As to the Scarf-Skin, and Skin, we shall say nothing more than we have said, they being alike in all parts: the Membrana adiposa, or fatty Membrane, is spread out in the Arm as far as the Wrist; and in the Leg, from the Groin to the Ankle: after that, follows the common Membrane of the Muscles in their natural scituation; in the Thigh the Fascia Lata, supplies its place. § 5. The Scapula or Shoulder-Blade joynted to the Arm, makes a Joynt, in the bending of which Joynt beneath Glandules are placed; and these places are called the Arm-pits: These Kernels often swell,

Apostemate, are infected with the Kings-Evil, Epimeliss, Boes Pestilential and Venereal, &c. § 6. The Shoulder or upper part of the Arm consists of one Bone, which is great and long: its Head or upper extremity is invested with a Cartilaginous membranous Ligament, and tendons, and furnished with particular Cavity, in which the Tendon of the Musculus Biceps lies; its lower extremities is fixed to a Pulley, whence is the bending of the Cubit inwardly, but suffers it not to be extended above a right Line. § 7. There are nine Muscles, viz. 1. Deltoideus. 2. Supra spinatus, which lifts upwards. 3. Latissimus or Arm-scapulor. 4. Rotundus major which pull it downwards. 5. Pectoralis. 6. Perforatus or Coracoclavicular. 7. Infra spinatus. 8. Rotundus minor. 9. Subscapularis or Immerus which move it backwards; but these three last moving together the Arm is as it were turned about, and obliquely outward raised up. § 8. Of Veins it is the Cephalica and Basilica from the Ramus subclavins, and the Axillaria from them both: Of Arteries, that accompanying the Basilica (for it has no Cephalic Artery) from the Axillaria, as to the Thoracica: Of Nerves, it has six pair, of which the 1. runs

into the *Muscle Deltoïdes*: the II. furnishes the *Muscle Biceps*, and lies under the Artery, and *Vena Basilica*: the III. is joyned with the former under the *Muscle Biceps*: the IV. runs along with the *Vena profunda*, and the Artery: the V. runs along by the former, between the *Muscles of the Cubit*: The VI. spreads it self between the Skin of the Cubit or Elbow.

II. Of the Cubit or Elbow.

§ 1. It consists of two Bones, moved by proper *Muscles*, viz. the *Ulna* and *Radius*. § 2. The *Ulna* has in its upper extremity two *Triangular processes*, called *Rodra* or *Glandes*: its lower extremity ends with a round Knob, to which is joyned a sharp process called *Spyloides*. § 3. It is moved by six *Muscles*, to wit, the *Biceps*, and *Brachieus internus*, by which it is bended; and the *Longus*, *Brevis*, *Cubitalis*, and *Brachieus externus*, by which it is extended. § 4. The *Radius*, or *offr foci*, which is the upper Bone, is received in the upper part by the *Ulna*, but in the lower it receives the *Ulna*, and are in the middle a little distant asunder, which space is fill'd with a thin ligament. § 5. It is moved by four *Muscles*, of which two are *Pronatores* or *Pullers* down, as the *Rotundus* and *Quadratus*: and two are *Supinatores* or *raisers* up, as the *Longior* and *Brevior*. § 6. The Elbow is supplied with *Veins* from the *Axillaris*, viz. the *Cephalica*, *Basilica*, and *Median*, to which add *Profunda* and *Subcutanea*, branches of the *Basilica*, which run through it: with Ar-

teries from the *Ramus subclavius*, in two branches, which pass to the inner side of the Hand: for the outer side has neither *Muscle* nor *Artery*: with *Nerves* from the *Plexure* of those which spring from the four lower *Vertebrae* of the Neck, and the two first of the Back.

III. Of the Carpus or Wrist.

§ 1. It consists of eight little Bones, which yet have no Name, but are in the first years Cartilaginous and soft, afterwards becoming Bones, they are joyned together with strong Ligaments. § 2. It is moved by four *Muscles*, viz. *Cubitæus* and *Radieus internus*, which are flexors or bender; and *Cubitæus* and *Radieus externus*, which are extensors or Stretchers out. § 3. Its *Veins* are derived from the *Cephalica*, *Basilica*, and *Median*, and in the middle of the Wrist is the *Funis Brachij*: Its *Arteries* from the little branches of the *Subclavius*; the upper branch of the *Axillary* goes right forwards through the middle of the Wrist, where the Pulse is commonly felt. § 4. It has *Nerves* from the first branch of the second *Axillary* pair, which run on the outside of the Wrist to the Thumb: and from the second and third branches of the same pair, which run obliquely within the Cubit to the Wrist: It receives also branches of the third pair, on its lower and inner side, which run to the inside of the Hand and little Finger: from the fourth pair on its upper and out side, which run to the Thumb, fore and middle Fingers: and lastly, from the

fifth pair, whose outer branch goes on the out-side of the Wrist to the middle, ring, and little Fingers; and whose inner branch passes on the inside of the Wrist, to the same parts.

IV. Of the Hand and Fingers.

§ 1. *The Metacarpus or Hand has four Bones fastned to the Carpus by the assistance of the Cartilaginous Ligaments.* § 2. *It has two Muscles called Palmares, viz. Longus, spread into the hollow of the Hand; and Brevis, which serves for hollowing the Palm of the Hand.* § 3. *It has the Armilla Membranosa, which is a round Ligament, comprehending the many Tendons of the Hand, as it were in a Circle, easily divisible into many others: Some Authors divide it into two Annular Ligaments, which being transverse, direct the Tendons which pass to the Fingers: the one in the out-side for the Tendons of the extending Muscles: the other in the inside for the Tendons of the contracting Muscles.* § 4. *To the former add the Vagina Membranosa which holds in the Tendons contained in the Hand.* § 5. *It has also the Fissura Oblonga, framed in each Tendon, for the passage of the Tendons of the Muscles, moving the third Joynt, which serve instead of a Pulley.* § 6. *It has Veins, Arteries, and Nerves, from those branches mentioned in the former Section.* § 7. *The Fingers consist of fifteen Bones (besides the twelve Sesamoidæans) which as yet have no certain Names given them.* § 8. *The four Fingers are moved by seventeen Muscles: three*

flexors, as Sublimis and profundus and one proper to the little Finger: Three Extensors, one proper to the Fore-Finger; one proper to the little Finger; and one common to all the Fingers: four Adductors, called Lumbricales: seven Abductors or Interossei, of which three are external, three internal, and one proper to the fore-Finger. § 9. *The Thumb is moved by six Muscles; two flexors, primus and secundus: two Extensors, primus and alter: Three drawers to, viz. adducens primus, secundus, tertius; of which the first is called Hypothenar pollicis, the third Antithenar: three drawers away, viz. abducens primus, secundus, tertius: of which the first is called Thenar: the latter two Innominati.* § 10. *The Thumb, fore, and middle Fingers receive Veins from the external branch of the Profundus, (the second branch of the Basilica:) the Middle Ring, and Little Fingers, from the internal branch of the same.* § 11. *The Thumb, Fore and Middle Fingers, receive Arteries from the upper branch of the Axillary Artery; and the ring and little fingers from the lower branch of the same Axillary.* § 12. *The Thumb is furnished with Nerves from the first branch of the second Axillary pair, and from the fourth Axillary pair: The Fore and Middle Fingers are furnished with Nerves from the fourth pair: the middle Finger from the first and second branches of the fifth pair: the ring and little Fingers have Nerves from the first and second branches of the fifth pair: the little Finger has also Nerves from*

from the third pair : and all the Fingers have Nerves, each of them two twigs, from the third branch of the second Axillary pair aforementioned. § 13. To the Fingers also belong Nails, which are similar spermatick parts, arising from Bones and Gristles, as the great Hippocrates does affirm. § 14. They are placed externally on the Tops of the Fingers and Toes, being of a hard but flexible substance, whose roots are joyned to a Ligament very sensible, by reason of the neighbouring Tensions : and therefore when the Nails are hurt, there is an exquisite Sense of Pain. § 15. Their efficient cause is thought to be that heat which the Soul directs to this, rather than to any other part of the Body ; yet the Nails are not made by the Soul, as Plempius would have, because, according to the Observations of Paræus, they still grow in such as have been 25 years Dead. § 16. The uses of the Nails are to be, 1. A safe-guard to the parts. 2. For Ornaments. 3. To free the Body from superfluous humors. 4. To defend the Body from Enemies. 5. To rub or scratch withal. 6. To foresheew Life or Death, for according to the flesh beneath they are redish, blewish, blackish, &c. and therefore Physicians are wont to observe the color of the Nails, as for example, if they grow pale, then the heat of the Heart is deficient ; if they grow livid or brown, the party is near Death. Moreover the white spots appearing upon the Nails of young people, are thought to proceed from a vigorous heat ;

and by them also, *Physiognomists* many times prognosticate. § 17. Each Finger is called also by a certain name, as the Thumb, *Poll: x à Pollendo* from its strength : the Fore-finger *Index* and demonstrator : the middle Finger *Impudicus* the Shame-less : the next *Annularis* or Ring-finger : the little one *Auricularis* the Ear-finger.

V. Of the Thigh.

§ 1. The Thigh has but one Bone which is the greatest of all the Bones in the Body ; outwardly it bunches forth, and is a little bended inwardly, and so descends internally, obliquely to the Knee, having three processes, easily separable in Infants. § 2. It has for its motion sixteen Muscles : four Benders, the *Lumbaris*, *Psoas minor*, *Iliacus secundus*, and *Pedilens*, but this last is only accounted a Bender by *Riolanus*, who yet acknowledges, that it is the uppermost and fourth Portion of the *Triceps* ; *Spigelius* and *Vestlingus* say also, That it is a Portion of the same *Triceps*. Three Extensors, *Gloutæus major*, *Medius*, and *Minimus*. Three Adductors, *Triceps primus*, *secundus*, *tertius*. Six Abductors, *Quadrigenorum primus*, *secundus*, *tertius*, *quartus*, and the *Obturatores* external and internal. § 3. It has Veins from the *Hschiatrica major*, the *Poplitæa*, which runs straight along behind, the *Suralis*, the *Muscula*, and the *Saphæna* which runs along through the inside of the Thigh. § 4. Its Arteries are the *Muscula Cruralis externa* and *interna*, above the Ham ; and the *Poplitæus* and *suralis* under the Ham. § 5. It receives Nerves

from the foremost branch of the first pair, which comes out between the last *Vertebra* of the Loyns and the first of the *Os Sacrum*; as also from the four pair of *Crural Nerves*, springing from the Plexure of the three uppermost pair of the *Os Sacrum*; of which the first and third pair supply the Thigh chiefly, the other two run to the Leg and Foot; and lastly, it has some few branches from the *Nervus sine pari*.

VI. Of the Leg.

§ 1. *Toe Leg* consists of two Bones, the greater of which is in the inside, and is called *Tibia* or *focile majus*: the lesser is on the out-side, and called *Fibula* or *focile minus*; both very much resembling the Bones of the Cubit; they are a little distant one from another, but are tyed together by a Ligament.

§ 2. Between the Thigh and Leg lies the *Patella* or *Knee-pan*, which in Infants is Cartilaginous, but in old people hard and strong, fit to defend and stay the Joynt, on the outside of which it is placed.

§ 3. For its motion it has eleven Muscles: four Flexors, to wit, *Biceps*, *Semimembranosus*, *Seminervosus* and *Gracilis*: four Extensors, *Rectus*, *Vastus externus*, *Vastus internus*, and *Crureus*: 2 Adductors, *longus* or *Sartorius*, and *Popliteus*: one Abductor, *fascialis*, *fasci lata*, or *Membranosus*. § 4. It receives Veins from the *Ischiatica major*, *Suralis*, and *Popliteus*, which sending branches down behind supply the Calf of the Leg, and so run on to the Heel: and from the *Saphæna*, which runs from the Knee by the inside of the Leg down to the Ankle.

§ 5. It has Arteries from the *Suralis*, viz. the *Tibicus exterior*, *Posterior alius*, and *Posterior humilis*, this last of which runs to the Foot and Toes. § 6. It has Nerves from the second and fourth pair of the *Crural*: from the second pair is sent a remarkable branch inwardly with the *Saphæna* to the Ankle: The fourth pair supplies the Muscles of both Leg and Foot.

VII. Of the Tarsus or Instep.

§ 1. It is made up of seven Bones, viz. 1. the *Astragalus*, *Talus* or *Ankle-Bone*. 2. the *Pterna*, *Calc* or *Os Calcis*. 3. The *Scaphoides*, *Os Naviculare*, or *Cimbidiforme*. 4. The *Cuboides* or *Os Tessere*. 5. 6. 7. *Ossa tria Cuneiformia*, or *Sphænoidea*, the three Wedg-like Bones. § 2. It is moved by seven Muscles, of which 2 are Flexors, *Tibicus anticus*, & *Peroneus anterior*: Three are Extensors, the *Gemelli duo*, to wit, the *Externus* and *Internus*, and the *Soleus*: two move it obliquely, as the *Tibicus posticus* and the *Peroneus posticus*. The two *Gemelli*, viz. the *External* and *Internal* constitute that very strong Tendon called *Chorda Hippocratica*, by which Butchers hang up Beasts. § 3. It has branches of veins from the *Ischiatica major*, which run to the Toes; from the *Poplitea* which run sometimes to the Skin of the External Ankle; from the greater and lesser branches of the *Suralis*, which with the *Poplitea* make that various and curious texture of Veins which are seen under the Skin upon the back or top of the Foot; from the *Saphæna* or *Vena Maléoli*, which supply the inner An-

Ankle, and run also to the upper part of the Instep or Foot. § 4. It has Arteries from the third branch of the Cruralis arising under the Ham. § 5. It has Nerves from the second pair of the Crural, which run inwardly with the Saphæna to the Ankle; from the Internal branch of the fourth Crural pair, which runs by the inner Ankle; & from the external branch of the same pair, which runs by the outward Ankle, and spreads it self to the out-side of the Foot.

VIII. Of the Metatarsus, or Foot, and Toes.

§ 1. The Metatarsus has five Bones, solid without, and hollow within, which are answerable to the number of Toes, to which they are joyned on their lower end, being on their upper end knit to the Bones of the Tarsus.

§ 2. It has only one Muscle, which is Plantaris (not much unlike Palmaris) which covers the whole Sole of the Foot, and by which the Foot is bended.

§ 3. It has Veins from the Ischias, the Suralis and Poplitea, and from the Saphæna, which are seen on the top of the Foot.

§ 4. It has Arteries from the third branch of the Cruralis, arising from the Crural coming from under the Ham.

§ 5. It has Nerves from the second and fourth pair of the Crural, from the second pair they run inwardly with the Saphæna; from the fourth pair, the outward parts and top of the Foot is supplied, and that

from both the Internal and External branches of the said Crural springing from under the Ham. § 6. The Toes consist of but fourteen Bones, (for the Great Toe has but two Joyns,) to which also you may add the *Ossa sesamoidea*, for the most part twelve in each Foot; if their numbers are at any time greater or less, it may be said to be an excess or defect in Nature. § 7. The great Toe has five Muscles, viz. Flexor pollicis, Extensor pollicis, Adductor primus, Adductor secundus, and Abductor pollicis. § 8. The little Toes have eighteen several Muscles, viz. Two Flexors, Major or Perforans and Minor or Perforatus: Two Extensors, longus and brevis, each of which are furnished with a four-fold Tendon answering to the four Toes: four Adductors, the Lumbricales: Ten Abductors which are the Interdorsi, and fill the void spaces of the Metapodium, being five Internal, and five External. § 9. Each Toe has two Veins from the Ischiatica major, and from the Saphæna; but from this last the Great Toe is more especially supplied. § 10. They have all of them Arteries from the third branch of the Crural, arising under the Ham, who borrow their Names from the Veins they accompany. § 11. Lastly, They have Nerves from the Internal branch of the fourth pair of Crural Nerves, arising under the Ham, distributing to each Toe, two twigs.

CHAP. XII. Of the B L O O D.

Its Generation, and Circulation.

I. Of the Generation of the Blood.

I. **T**HE Original of the Blood, is a Chylous juyce made of Meat received in by the Mouth: the harder Meat is chewed by the Teeth, which being moistned by the Spittle, receives thereby a previous preparation in order to the making of Chyle.

§ 1. From whence Spittle has its beginning is much Controverted: Some say, from the Veins and Arteries, because they communicate several branches to the Maxillary Glandules, through which the late invented *Ductus Salivales* pass; but how they can afford so great a quantity of Spittle, as is sometimes thrown forth in a very short time is not well understood. § 2. But others rather derive it from the Stomach and *Lymphaducts*, which adhere to the *Salivals* upon these following Reasons, *First*, in voluntary spitting, the Spittle may be observed to ascend from the Stomach into the Mouth it self. *Secondly*, the Tongue, Mouth, and whole Stomach have inwardly a common Tunicle. *Thirdly*, because the Meat in the Mouth, as well as in the Stomach ought to be mixt with Spittle. *Fourthly*, because the *Lymphaducts* are dispersed through the whole Body, and so go both to the Stomach and Tongue. *Fifthly*, because no hu-

mor can be well thrown out of the Body, but by peculiar passages. § 3. As to the quality of the Spittle it is somewhat saltish, yet not always necessary to be perceived by the Tongue; for my part I judge it to be of the nature of an alkalious Salt, for several good Reasons: and also, that it might contribute to the fermentation of the Food in the Stomach. § 4. The *Ductus Salivales* (through which it passes,) have but one strong Tunicle, not much unlike the *Ureters*, but that they are lesser; and these are on each side one. § 5. They have their Original (endued with many roots) from a certain great Glandule, lying under the Tendon of the *Musculus Diaphragmaticus*, not far from the upper part of the Jaw; then they run under the Tongue above the great Nerve of our tenth pair, to the more inward parts of the Mouth; where, in the two *Ranine Glandules* near the bridle of the Tongue they Terminate. § 6. From these passages being variously perforated issues out the Spittle into the Mouth, which is (as aforesaid) mixed with the Food in Chewing, both to moisten it, and to help forward its Fermentation in the Stomach.

II. The Food thus chewed and prepared passes through the Oesophagus

phagus or Gullet, (by the assistance of proper Muscles) and is conveyed into the Stomach, where it is made Chylus.

§ 1. This Meat received into the Stomach is evidently embraced by it round about, although (saith *Waleus*) it be but the quantity of two ounces; and this just as we see drawn Purfes contract themselves about a Bullet, or round Ball within them. § 2. The Orifices also of the Stomach both upper and lower, are both shut; but the lower not so strait, but that being lightly pressed, the first prepared Chylus may there find a passage. § 3. The Meat being thus received into the Stomach is thoroughly to be moistened with the humidities of the Stomach, and with Spittle and Drink, and with a certain fermentative juyce sent from the Spleen by the *Ramus Celiacus* of the Splenetick Artery, according to its Scituation, whereby it quickly become Porus and Spongy, through the help of the natural heat of the Stomach Concocting, and the said juyces causing a fermentation. § 4. Not long after the Meat both thick and thin is as it were torn and divided into infinitely small Particles, which is doubtless done by some acid or sharp humor sent from the Spleen, as aforesaid, into the Stomach, because there is no other part in the Body, that we can perceive which is acid or sharp: this *Waleus* somewhat proves, upon Swallowing a bit of a boyled Spleen, especially of a Sow, for that heaviness of the Stomach proceeding from the

quantity or grossness of Meats, is thereby presently helped.

Moreover that a sour humour should do this, is evident by Experience, for that the Stomach being burthned, as aforesaid, doth find it self eased, by taking a little Vinegar, juyce of Limons or Citrons, Stale Beer, Oyl of Vitriol, Salt or Sulphur, &c.

§ 5. The Meat being thus mixed in its smallest Particles with those Liquors, does in length of time assume a whiteness (by force of the concoction and digestion) which something resembles both the consistence and the colour of thin Barley Cream, and this is that which is called Chylus.

§ 6. Now the Stomach continually digesting, first sends away that Meat which is easiest of Digestion to the Guts, not detaining it till the remainder is in like manner concocted, the which both Loosnesses and Vomitings evidently declare.

§ 7. And therefore as all Meat does not receive the same change in the Stomach, in the same space of Time; so that which is thinner and well chewed is sooner and easier digested than that which is grosser, and swallowed down in great bits, the former being turned into Chylus, while the latter continues yet solid. § 8. Hence it appears that Broths, Milk, Drink, and such like thin things are in an hours space or sooner digested, and (if nothing hinders) then also distributed, which the voiding of Urine only presently after them doth evidently shew.

§ 9. Bread is found to be of a mean

mean digestion; in the first hour and half it is but little changed, in the next hour it is made rare and light, like a Sponge: in the next hour it is divided into very small Particles, and so mixt with the Juyces, that it appears all liquid, and is soon after mostly digested, so that between the fourth and fifth hour after eating, it is sent out of the Stomach into the Guts. § 10. What stays behind is by little and little digested, with other things if Eaten, which are harder of digestion, and in this Order according to the opinion of the most excellent *Walaurs*; first Pease and Beans, then Fish, then Flesh, which is perfectly digested and thrust out between the sixth and seventh hour, but Beef between the seventh and eighth hour. Membranous parts of Animals are longer in digestion, also Eggshells; and Bones have abode in the Stomach to the third day, in which space of time they were become like Gristles. All these Observations were easily made in Dogs, which were cut up alive, at several distances after they had eaten Meat.

III. *The Chylus, being thus digested in the Stomach, is thrust through the Pylorus into the Intestines, in which passage there is a notable Peristaltick motion both of Stomach and Guts.*

§ 1. The Stomach contracting it self by its *Fibres*, squeezes out as much *Chylus* as is digested, and by that pressure it seems also to open the *Pylorus*, which has no discernable *spontanus* motion in it self, as for certain the Stomach and Guts have. § 2. From

the *Pylorus* the *Chylus* first falls into the *Duodenum*, then into the *Jejunum*, after into the *Ileum*, and some small Portion into the *Colon* and *Rectum*. § 3. After the enterance of the *Chylus* into the *Duodenum*, it becomes mixed first with *Choler*, sent from the Gall-Bladder by the Cystick passage, or *Meatus Biliaris*; then with the acid Juyce of the *Pancreas*; both which open about four Inches under the *Pylorus*. § 4. The mixture of these two Juyces with the *Chylus*, causes a new but gentle fermentation, whereby the *Chylus* becomes the more perfect for a future motion; and this we are forced to believe, for as much as the Gall-juyce is a perfect Alcali, and the Pancreatick juyce an Acid (though in its right Temperament) not much to be discerned; yet so much as sufficiently to prove its nature and quality; nor ought it to be very acid, lest thereby, it should promote a fermentation so great as to prejudice the Chyle, and hurt the Constitution of the Body, as the learned *Sylvius*, in his discourse of Feavers has not unhappily hit upon.) § 5. Now whereas the mixture of the Pancreatick juyce is thought chiefly to be made for promoting the aforesaid fermentation; yet it has another end also, which is to abate the bitterness of the *Choler* mixed with Chyle, lest the Chyle should (by that time it is turned into Blood) not only be made exceeding bitter, but also burnt. § 6. The necessity of the mixture of *Choler* with the Chyle is sufficiently known

known, viz. 1. To excite the fermentation aforementioned, that the *Chylus* might be made the more perfect. 2. To help forward the Peristaltick motion of the Guts, (by pricking them in innumerable places) in order to the farther carrying down of the Chyle, and Exclusion of the Excrements. § 7. But these uses are not all, there is one use more, which is notable, and which upon serious consideration we have thought of, it being in a sort demonstrable to the external Senses: which is, thereby to keep the Blood or *Chylus* (being to converted) from congelation. For it is notoriously known, that Blood easily Congeals; and in the Killing of Hogs it is daily seen, that if Salt be mixed (so as to be dissolved) with the Blood whilst it is hot, it will not when cold be Coagulated; and the same *Ph. romemon* is to be observed in the mixture of all *Alcalious* Salts whatsoever, but not of Acids. § 8. Hence the necessity of the Cholerick humor is apparent, and that it is not indeed an Excrement (as the Ancients thought) but a necessary juice of the Body, without which, the *Oeconomy* thereof could not easily, nor long be upheld. § 9. Moreover from hence the cause of the thicknes or thinnes of the of the Blood is manifest; which is seen very gross in cold, dry, and melancholy people, where the mixed Choler is either defective in quantity, or vitiated, or corrupted in quality so as that it cannot perform its office, but the Blood grows thick, and black as

it were, from whence proceeds a degenerate and unhealthy habit of Body. § 10. So also if Choller be mixed with the *Chylus* in too great plenty, the Blood then becomes too thin, and is thereby filled with Serosities, and from whence also often times proceeds a Droply, especially a *Leucophlegmatia*, or *Anasarca*, and not always the Jaundice, as some great Physicians have thought.

IV. Of the Intestines the *Chylus* is (after a very little stay) conveyed into the *Vena Lactea*, viz. so much as is useful to nourish the parts; what remains, or is unuseful, is cast out through the Belly.

§ 1. What the *Vena Lactea* are, their constitution, situation, original, insertion, and various uses or ends, we have at large explicated in Cap. 3. sect. 12. as also in Cap. 8. sect. 7. foregoing to which we shall here refer you. § 2. The *Chylus* being lodg'd in the Intestines, is driven out of them by the constriction of their transverse Fibres; and while many Fibres, and which mutually follow one another, do act, the *Chylus* is pressed, nor can it all slip downwards, whereupon some of the pressed *Chylus* is thrust into the *Vena Lactea*. § 3. And lest that the *Chylus* should slip too soon to the Pandament, it is stop't by the constriction of the lower Transverse Fibres, where being thus shut and compressed both above and beneath, it is violently pressed forth through the wrinkled Coat of the Guts, as it were through a Strainer into the Milky

ky Veins. 4. It is also very probable that the *Chylus* is drawn out of the Guts and *Venæ Lactææ*; because it is moved more swiftly out of them, than the *Intestines* or *Venæ Lactææ* do seem to press, drive or force the same.

§ 5. In the Guts the *Chylus* is of an Ash color, being seldom colored by the yellowness of the Choller mixed with it: and does then presently enter the *Venæ Lactææ*, which enterance does not cease in any of the Guts, so long as any *Chylus* remains in the said Guts; whence it is, that the *Intestinum Rectum* it self is endued with milky Veins, which many times seem to look white, by the afflux of the *Chylus*.

§ 6. And this progress of the Chyle from the Guts through these *Lactææ*, *Wallius* has demonstrated by Ligature, wherein he observ'd, that from the Cavity of the Guts to the Ligature, they were full and swoln: but from the Ligature to the Mesentery, they were empty and fell in.

§ 7. This *Chylus* in the *Lactææ*, is alwayes white, although it proceeds from Ash-colored *Chylus* in the Guts, or from such as is dyed yellow by Choler.

V. Out of these *Lactæal Veins*, the *Chylus* is conveyed to the *Pancreas Mesenterii*, which is in the middle of the Mesentery, and to the other two Kernels of the same part called the *Lumbar Glandules*, scituate near the left Kidney.

§ 1. The *Chylus* being now brought to its Receptacles (first found out by the Learned and Ingenious *Pecquet*, receives a farther Alteration, in order to its

sudden transmutation into blood; for it has been alwayes observed, That Nature perfects nothing at once but by degrees: and, was it not necessary here for the *Chylus* to receive a farther Alteration and change, Nature might as well have conveyed it to its destinated place in streight Passages by Pipes. § 2. These Receptacles of the *Chylous Juice*, contain a certain ferment, by which all the *Chylus* brought into them, is transmuted into a new property; as is also seen in the Gall-bladder. The sanguinous serosities being strained thereinto become Gall: in the *Lymphatick Glandules*, the same serosity is transmuted into *Lympha*: and in the Emulgent Veins and Kidnies the same serosity, by the Fermentum of those parts, is made Urine. § 3. By virtue of this new property of the *Chylus*, it is apt to receive the form of Blood; and without which the sanguinifick property of the Blood could not be impressed upon it.

VI. From these Receptacles of the *Lactææ* the *Chylus*, is conveyed first by the *Lactææ* of the Mesentery to the Liver: Secondly, by the *Lactææ Thoracicæ* to the Heart; in both which parts it is converted into blood for the nourishment and sustenance of the body and all its parts.

§ 1. That not any of the *Chylus* is conveyed to the Liver, and there converted into blood, by the sanguinifick property of the Liver, is confidently affirmed and maintained by *Pecquet*: but the renowned *Bartholine* has sufficient-ly

ly and learnedly proved the contrary, in opposition to him. § 2. If by an indifferent Conjecture (saith *Bartholine*) I can reach any thing, I think that the Heart and the Liver share the work between them: that either promiscuously both of them receive the nutritive humours, or dividing the Duty, this receives that which is thin, and that, that which is thick. It is also most certain, that the thoracic Veins are not able to carry all the Chylus. § 3. It is also observ'd, That the *Lactææ* of the Mesentery, coming through the *Pancreas* or Greater Glandule, and the sides of the *Portæ*, are grafted into the very Liver: and this very thing many Learned Anatomists assert: and *Asellius* their first finder out, did find their Insertion into the Liver: § 4. *Walleus* also affirms, That the *Chylus* is moved by the milky Veins into the Veins of the *Portæ*, into the Liver, and sometimes into the *Vena Cava* by Pulsion (as a Ligature does shew,) where being mingled with the Blood, and the *fermentum* coming from the *Spleen*, it is transmuted into Blood, and moved by the same Cause which moves the Blood. § 5. If any shall object that the *Chylus* is rather drawn in by the *Meseraick* Veins, and there being mixt with the Blood, is conveyed to the Liver, and so to the Heart: we desire of them to answer these following Queries: first, why was never any *Chylus* seen in those *Meseraicks*, but only blood? Secondly, What is the use of the *Lactæal* Veins? Thirdly, Why is their

rise in the Guts? Fourthly, why have they Valves so placed to hinder the regress of the *Chylus*? Fifthly, Why do they all of them go together to the Glandules of the *Chylus*? Sixthly, Why are the great *Lactæal* Veins joynd together? Seventhly, What is that white juyce (if it be not *Chylus*) which does pass into the *subclavian* Veins?

VII. The Chyle (saith *Wallæus*) being carried in these Milky Veins is mixed with the Blood in the *Ramus Mesentericus* in the *Vena Portæ*, and in the very Liver also it self, where it receives its sanguification.

§ 1. For in what place soever you ty these *Lactææ* they always swell before the Ligature: because by it the *Chylus* is hindred for passing to the Places named: but being loosed, the *Chylus* is manifestly infused into those parts. § 2. The Branches of the *Vena Portæ* in the Liver, altho in sundry places they are Knit to the branches of the *Vena Cava*, yet are thy never opened into a great branch of the *Cava*; but the smallest branches of the *Portæ* do transfuse this *Chylus* mixt with Blood, into the smallest Branches of the *Vena Cava*, as is easily to observe in the Liver blown up when the Flesh is taken off, and it swims in water. § 3. Out of the little Branches of the *Cava* in the Liver, the Blood runs into the *Vena Cava*. § 4. Out of the *Vena Cava* it enters into the right Ventricle of the Heart: out of the right Ventricle of the Heart it enters manifestly into the *Palmonick* Artery, and

and, by it into the Lungs. § 5. Lastly, out of the Lungs it returns to the Heart by the *Vena Pulmonalis* into the left Ventricle, from whence it is cast into the *Aorta* by Pullation, and from thence to the middle and smallest Arteries for the nourishment of the whole body.

VIII. Lastly, From the *Pancreas Mesenterii* and the two *Lumbar Glandules*, runs a several Branch or Vein (carrying also the *Chylus*) which joyning above the Left Kidney, constitute the *Vena Lactea*, about the bigness of a great Quill: this *Lactean Vein*, lying between the *Aorta* and the *Vertebrae* of the Loins, covered with fat, runs upwards, and above the heart, ascends by the Gullet, and so hastens to the left subclavian Vein, where it ends in One, two, or three Branches: out of this subclavian the *Chylus* descends by the ascending trunk of the *Vena Cava* into the right Ventricle of the Heart, where, by help of the heat and quality of the part, it is changed into Blood, from the right Ventricle the Blood passes by the *Arteria Pulmonalis*, through the Lungs, and *Vena Pulmonalis* into the left Earlet, and left Ventricle of the Heart.

§ 1. Here is to be observed that as a part of the *Chylus* is carried by the *Lactean Veins* of the Mesentery to the Liver, and there Sanguified; so another part also is carried by the Thoracick *Lactean Vein* to the Heart, and there in like manner transmuted into Blood. § 2. The *Chylus* in this Thoracick passage going to the Heart is mixed with the Lymphatick juice, that thereby

the said *Chylus* may be made the more liquid, and so be the more conveniently conveyed through the narrower passages, whereby it may be joyned to the Arterial Blood in order to its transmutation, by which it is made fit not only to serve for the nutrition of the moist parts, but also to the cooling and moistning of the hot.

§ 3. Now this *Lympha* or Water, running through the whole Body in the Lymphatick Vessels is sweet, not being Salt, as Urine is. And it is also a Serous part of the Blood, emitted from the Arteries, in certain Vessels, ordained for its constant passage.

§ 4. These Lymphatick Vessels or watery passages, (almost every where) correspond and run with the Arteries, being innumerable in the whole Body, and have their rise both from the Liver and the Joynts.

§ 5. They run and correspond with the Arteries that they might the more readily receive the Serous or Aqueous part of the Arterial Blood, which remaining in these Vessels, would render the Blood too thin, whereby it would be deprived of its natural consistency and strength.

§ 6. These Lymphatick Vessels consist of a very thin Tunicle, whence they are easily broke, in bigness seldom exceeding a Ravens Quill, and they are furnished with Valves every where existing, which Valves look also inwards, whereby it appears that the motion of the *Lympha* is from the Circumference to the Center. These Valves were demonstrated by the Ingenious *Ruyssch Anatomist* of

of Amsterdam, Anno 1655. § 7. The Arteries then, carry the ferous humour to all the Glandules under the colour of Blood; but that which is particularly carried to the conglobated Glandules, (which we here call *Lympha*) is chiefly subservient to Sanguification, and is inserted into the *Ductus Thoracicus*, and there permixed with the *Chylus* for the same intention, where being carried to the Heart, with the descending Blood, it then passes into the right Earler of the Heart and into the right Ventricle, where not long after being mixed with the Arterial Blood, it performs a Circulation. § 8. Hence it appears, that the Lymphatick juyce Circulates as well as the Blood. § 9. The Lymphatick Veins ascending from the Feet, and those which come from the Liver, embrace the *Vena Porta*, and so pass to the Meseraick Glandules of the Chyle, from whence they discharge their *Lympha* or Water into the great Lacteal Thoracick Vein, which, as aforesaid, carries the Chyle to the Heart. § 10. Lastly, The Lymphatick Vessels proceeding from the Arms, both lye above and under the Veins, till they come to the Subclavial Vein, which they enter about the same place where the great Lacteal Thoracick doth, being supplied with a particular Valve, just at their entrance, that so altogether they may carry the Water or *Lympha* mixed with the *Chylus*, to the Heart, as aforesaid. Thus have we in as succinct and concise a manner

as might be, given you the natural and true Generation of the Blood, from the natural production of the *Chylous juyce*: in what follows, we hope clearly to demonstrate its necessary, and unavoidable Circulation.

II. Of the Circulation of the Blood.

IX. The Blood being thus brought into, and contained in the left Ventricle of the Heart, is expelled into the Arteria Aorta, the greater and the smallest Arteries.

§ 1. This is easily demonstrable in living Anatomies, where they being bound, do mightily swell towards the Heart; but towards the extream parts they grow lank, and fall away; the Ligature being loosed they apparently send the Blood to the remoter parts of the Body. § 2. This Blood is carried out of the greater Arteries into the lesser, and by the same conveyed into all parts of the Body for their nourishment. § 3. This Arterial Blood is thinner than the Venal, by reason of the admixtion of the Lymphatick juyce therewith; yet by the Observations of *Waleus* not a fourth part thinner. § 4. This Lymphatick juyce, is separated from the Blood in the Arteries, and conveyed, as aforesaid, into the Lymphatick Vessels. § 5. The Blood is conveyed into the *Aorta*, and from thence into all the other Arteries, not so much by attraction, but by propulsion or thrusting; how this Pulsation is made, we have already signified cap 4.

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ſect. 1. § 7. aforegoing. § 6. How often the Heart Pulſes in an hour we cannot determine; *Waleus* ſaith, That he has obſerved it to Pulſe above three thouſand times, and that as long as it has any vigor left, it expels ſome Blood at every Pulſation; for the *Aorta* being bound near the Heart, he opened it between the Heart and the Ligature, and ſo ſaw ſome Blood come out at every Pulſe, till the Heart came quite to languish, for then ſomewhat came away after three or four Pulſes only; alſo he cut off the tip of an Heart, and ſetting the ſame upright, he obſerved (though the Ventracles were not full,) that at every Pulſe ſomewhat was ſhed forth. § 7. This Pulſation is of neceſſity, becauſe of this circular motion, for if the Heart ſhould not expel the Blood brought into it, it would not be able to contain it, but the Vital Spirits would be immediately ſuffocated. § 8. Hence it appears, that the Blood which has once paſſed the Heart, flows thither again, and muſt return again into the Arteries; ſo that there is a Circular motion of the Blood from the *Vena Cava* into the right Ventricle of the Heart, from thence by the *Arteria Pulmonalis* into the Lungs; from the Lungs by the *Vena Pulmonalis* into the left Ventricle of the Heart, from thence into the *Aorta*, and other Arteries; from the Arteries into the Veins, out of which it returns again by the *Vena Porta* into the Liver, and

Vena Cava, and ſo into the Heart, and ſo again to the Arteries.

X. This Blood thus thruſt into the Arteries, ſerves for the nourishment of the Body, and all its parts; what is over and above the ſervice of that uſe, is transferred into the Veins.

§ 1. The Blood is tranſmitted into the Veins out of the ſmaller Arteries in all parts of the Body by certain *Anaſtomoses* of thoſe Veffels; for the Arteries have a way open into the Veins, to the intent that the Blood might paſs by thoſe Mouths; and it is certain that the Arterial Blood does naturally enter into the ſmaller Veins, to the end that the parts might be nourished with the ſame. § 2. Moreover this is apparent in Blood-letting, where it is ſeen the Veins only ſwell below the Ligature, and upon the appertion, you may if you ſo pleaſe, extract ſeveral pounds of Blood, yea, all the Blood in the Body; this cannot come all out of the Veins below the Ligature ſimply conſidered, but from the perpetual afflux of Blood into them from the Arteries, by means of the ſaid *Anaſtomoses*; which Arteries are not ſtopped by that Ligature above the Oriſice, as the Pulſe remaining intire does witneſs. § 3. This very thing may alſo be evidently proved in ſuch perſons as have the Veins of their Arms or Hands very conſpicuous, without opening of a Vein; for if you ſtop the Vein near the Hand with one Finger, and with another Finger force the

the Blood upwards, the whole Vein will appear empty, and not be filled again till you take the Finger stopping the Vein away: and the reason is, because the upper Blood going forwards, leaves Valves behind it, which hinders it from descending.

XI. *The Blood transmitted out of the Arteries into the Veins, goes out of the smaller Veins into the greater.*

§ 1. The Blood cannot flow out of the greater Veins into the lesser, *first*, because their Valves (being placed contrary) would hinder: *Secondly*, because the Arteries convey their Blood into the very smallest Veins. § 2. But some may object the opening of a Vein for Revulsion in a Pleurisy; to which we Answer, That the Blood which flowed out of the *Vena Cava* into the *Azygos*, and out of the *Azygos* into the *Pleura*, admits of no such kind of Revulsion as they would have: for the *Basilica* being opened, the Blood may be drawn out of the Arteries of the Arm: the Arteries of the Arm drawn out of the *Axillary* Artery, the *Axillary* out of the *Aorta*, by whose *intercostal* branches it had flowed into the *Pleura*, and not by the twigs of the *Azygos*. § 3. Some may object such as have the Varices; but the cause of the exceeding Swelling of a Varix, being considered with the Circulation of the Blood, may easily solve the Problem without any more Words; for new Blood still coming out of the Arteries, may be cause sufficient of the dilatation, where there has been any other

violence preceeding. § 4. This motion of the Blood is not made only through all the Arteries of the Body in the same manner as through some; but also through all the Veins of the Body in the same manner, as through others. § 5. So that besides what has been said of the Arteries and Veins of the Arms and Legs, it is clear that the Blood is moved through the *Spermatick* Arteries to the Testicles; through the Veins from the Stones to the left Emulgent, or *Vena cava* in the right-side: Through the *Mesenterick* Arteries to the Guts; through the Veins to the *Ramus Mesentericus*: Through the *Cæliack* Arteries to the Spleen: Through the *Ramus Splenicus* of the *Vena Porta*, forthwith to the Liver: Through the branches of the *Cæliack* Artery (which answer to the following Veins) to the Stomach and Caul: Through the *Vena Gastrica* and *Epiploica* to the *Ramus Splenicus*. The short Arterial and Venal Vessels are branches of the *Arteria Cæliack*, and *Vena Splenicæ*, which when they are come into the middle space between the Stomach and the Spleen, are divided into two branches, one of which goes to the Stomach the other to the Spleen; by this branch of the Artery, the Blood goes to the Spleen, and by the branch of the Stomach to the Stomach: By the Venal branches to the Trunk of the *Vas breve*, from the Stomach and Spleen, it is moved through the emulgent Arteries to the *Vena Cava*: By the Coronal Artery of the Heart into the

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Vein; out of the Coronal Vein of the Heart into the *Vena Cava*: By the Intercoſtal Arteries into the *Pleura*; out of the *Pleura*, by the Veins into the *Azygos*, and thence into the *Vena Cava*: All this, ſaith *Waleus*, I found by binding the Arteries and Veins in live Anatomies. § 6. Credible alſo (ſaith he) it is, That the Blood flows from the Carotick and Cervical Arteries unto the four Ventricles of the Brain, for that they have paſſages open to the ſaid Ventricles: and truly ſince the Blood out of the Ventricles, flows back through the *Jugular Veins* into the Heart; the Ventricles cannot receive it elſewhere than from the Arteries; but I am apt to believe that the Arteries empty their Blood into the little branches of the Ventricles, rather than into the Ventricles themſelves, becauſe thoſe Veſſels inſerted into the ſaid Ventricles are greateſt near the ſame.

XII. From theſe greater Veins, the blood paſſes both immediately to the *Vena Cava*, and mediately to the ſaid *Cava*, by the *Vena portæ* through the Liver, by a continual and quick Motion.

§ 1. That the Blood, in part, paſſes immediately to the Liver and *Vena Cava* is ſo clear that it needs no demonſtration, both from the Valves which look towards the Liver; and from the *Cava* taking its original from the ſame Viſcera. § 2. And, that other parts of the Blood paſſ mediately to the ſaid *Cava* by the *Vena Portæ* we ſhall now prove; for that by the Veins

of the *Portæ*, blood is brought to the Liver from the *Inteſtinum Reſtum*, the *Colon*, *Cæcum*, and *Meſentery*, by the four Ramifications of the *Meſenterical Branch*; and from the *Stomach*, *Spleen*, *Pancreas* and *Omentum* from the four Ramifications of the *Splenetick Branch*, to wit, the *Gaſtrica major*, *Coronaria*, and the right and left *Epiploica*, is apparently evident by common diſſections. § 3. Now the blood comes out of the *Vena Portæ* into the Liver, and from its Trunk diſſeminates Branches within the Liver (after the manner of an Artery) as *Pecquet* has apparently proved: For having tyed the branches of the *Cæliac Arteries* where the Blood enters into the *Meſentery*, they did ſwell from the Trunk to the Bandage, and became flaccid between the Ligature and *Inteſtines*. But having ty'd the *Meſeraic Veins*, they fill'd between the *Inteſtines* and Ligatures, and became flaccid between the Ligature and Liver. The Veins of the Spleen were proved with the ſame ſucceſs: Alſo the *Vas breve* ſwelled between the *Stomach* and Ligature, but between it and the Spleen it ſeemed to fall; yet being opened on both ſides the Blood followed; from hence it appears that in this Vein, the Blood is either ſtopped by none, or at leaſt by very ſmall Valves within its branches. § 4. The *Meſenterick branch* of the *Vena Portæ* being bound (about three inches from the Liver) and the *Splenetick branch* in like manner tyed; immediately the

Pipe

Pipe between the Ligature and the Liver, which before was turgid and swelled, now becomes a bloodless Channel, the said Pipes on the other side of the Ligature in the mean season Swelling with Blood flowing from the Intestines, Mesentery, Stomach and Spleen: from hence it appears, That the Blood flows plentifully out of the *Vena Portæ* into the Laborinths and Windings of the Liver, by means of the almost innumerable branchings of the *Portæ*. § 5. Now to prove that this Current of Blood springing from the *Vena Portæ*, has its course to the *Vena Cava*; you may tye the branch of the said *Cava*, where it enters the Gibbosity of the Liver, as far from the Liver as you can, so shall you see the Blood rush to the bandage (the branch greatly filling between the Ligature and the Liver) whereby the entrance of the Blood of the *Vena Portæ* into the *Vena Cava* will be apparently manifest to the Senses. § 6. Also this motion of the Blood, out of the *Portæ* into the *Cava* we have in part proved by the mutual *Anastomoses* of these Vessels in cap. 3. sect. I. § 6. foregoing. § 7. Moreover that the Blood should pass through the Liver and *Vena Cava* to the Heart, seems to be the greatest reason imaginable; for as much as the Liver is the greatest of all the *Viscera*, and Nature would never have formed so great a body had it not been for some extraordinary use. And its greatest Vein, coming out with a large Orifice, goes to, and enters

the Heart; now what necessity is there for the *Vena Cava* to be distributed with such numerous branches through the Liver, and so presently to ascend to the Heart, but only to convey back again the Blood to the Heart.

§ 8. To these reasons let us add, the progress of the Maternal Blood to the Child in the Womb, which comes first up the Umbilical Vein to the Liver, before it goes to the Heart of the Infant: the which Valves and Ligatures evidently demonstrate, for that the Arterial Blood is carried by the Umbilical Arteries, from the Child to the Womb; but the Venal by the Umbilical Vein from the Womb to the Child. § 9. And now we are treating of the Child in the Womb, let us shew you the Bloods Circulation whilst it is there inclosed; which we will do from *Walaus*. The Maternal Blood enters into the Umbilical Vein, from whence into the Liver, the *Vena Cava*, and right Ventricle of the Heart, (for the Heart beats in the Child, though it be imperfect:) Out of the right Ventricle, it goes into the Arteria Pulmonalis; but because the Lungs do not breath, and therefore are not opened, they cannot receive the Blood plentifully, nor send it to the *Vena Pulmonalis*; and therefore, it goes out of the Arteria Pulmonalis by a peculiar passage into the Aorta; and likewise by a peculiar passage or hole of the *Vena Cava*, it enters the *Vena Pulmonalis*, from whence it runs into the left Earlet of the Heart, and into the left Ventricle thereof. Out of

the left Ventricle, just as out of the Arteria Pulmonalis, it enters into the Aorta; so that in the Child in the Womb, Nature uses the two Ventricles for one. Out of the Aorta the Blood goes to the Umbilical Arteries, (for they being bound, the parts towards the Child do Pulse and swell;) from the Umbilical Arteries it goes to the Placenta or Womb Cake, where the Arteries are joyned to the Veins by manifest Anastomoses, by which passages, the Blood again entering the Umbilical Vein, is circularly carried through all the afore described rounds. § 10. The motion of the Blood in Humane kind is continual out of the Heart into the Arteries, out of the Arteries into the Veins, out of the Veins into the Liver, and out of the Liver into the Heart again: And it is so continual, as that it is never so much as once stopped or Interrupted for one moment of time; and the reason is, because this motion is made by the Hearts transmitting and receiving; and therefore it cannot but be naturally continued to the last moment of Life: this motion is also quick; for an Artery or Vein being bound or compressed, it immediately Swells and grows round and hard, and the Ligature or Compression being taken away, the Blood is instantly and swiftly moved. But in what time the Blood performs its circular motion, from and to the Heart, is not exactly to be determined. § 11. Reason may also inform us, that in this motion of the Blood, the swiftness thereof must be alike, both in

the Arteries and the Veins: And so much nourishment as the Arteries give to the parts, so much new Blood made immediately of Chyle, must be repayed to the Heart again, or at last the Heart will be void of all moisture, which thing Sense also confirms to us. § 12. The Blood is not only in part generated in the Liver, but it is also by its Circular return thither made more perfect: And this is done by the mixion of an acid humor with the Blood elaborated in the Spleen, and sent from thence, to the Liver, whereby it becomes as a ferment to the Blood and Chyle, and whereby the Blood is made the more perfect and fit for Circulation: so that in the Liver the Concoction of the Blood is continually repeated, and by virtue of the said acid ferment sent from the Spleen and mixed therewith, it is made much more perfect: if any excrementitious part should be there separated, it is all by the Coeliac Artery, and the Hemorrhoidal Vessels sent to the Guts. § 13. And that great Anatomist Franciscus Sylvius saith, That the Spleen farther concocts the Arterial Blood and brings it to a higher degree, yea, that it more than perfects it: So that the Blood in this place might assume (as it were) the nature of Ferment, by the means of which in a short time, a great quantity of the Mass may become so acid, and so mightily concocted and strengthened in the Spleen, that being sent from thence into the Liver it might not only help to

better concoct the weak and returned Blood, but also prepare, and transmute the new *Chylus* into the same *Sanguinous humour*. § 14. This Argument he proves by several reasons, as first, because the *Spleen* receives a great quantity of Blood from the *Heart*, and a much greater quantity than is necessary for its nourishment. Secondly, that it can be returned back again to the *Heart* by no other way, but by the branches of the *Cava* and *Portæ*. Thirdly, because it is continually mixed with the returned Blood and *Chylus* in its passage to the *Heart*. Fourthly, because in Chymistry we daily see that such mutations happen in Nature.

XIII. Out of the *Vena Cava*, the Blood enters into the right Earlet of the *Heart*, and from thence into the right Ventricle of the same.

§ 1. This has been evidently proved by ocular inspection, in the Dissection of Live Anatomies, wherein it has been observed, that the *Vena Cava* did a little Pulse, and at every Pulse did send forth a little Blood. § 2. This motion of the *Vena Cava* is most evident near the *Heart*; yet it has been also observed in live Dogs, all along that passage from the *Liver*, and from the *Jugulum*, as far as to the *Heart*. § 3. The right Earlet drives what Blood it receives by a certain pulsion or constriction, into the right Ventricle of the *Heart*; for the right Ventricle being cut open as far as the Earlet, at every constriction, there evidently ap-

peared somewhat to be droven out of the Earlet into the *Heart*, which thing was also observed by the famous *Harvey*. § 4. But we suppose the Blood is also drawn both into the right Earlet and right Ventricle, for that they receive and ought to be nourisht within; now that which must nourish must be drawn, to the end that the part may receive that Blood, which is most useful to it.

XIV. From the right Ventricle of the *Heart*, the Blood passes by the *Arteria Pulmonalis* into the *Lungs*.

§ 1. As the Blood comes to the right Ventricle of the *Heart*, so also comes it to the *Lungs*, to wit, both by pulsion and attraction, for as much as the causes are yet the same: but the impulse of the Blood, is not observed to be so strong out of the *Arteria Pulmonalis* when the *Lungs* fall, as it is out of the *Vena Cava*. § 2. When the Blood is thus driven into the Ventricles of the *Heart*, the *Heart* has no motion evident to the *Eyes*; but if you put your Finger upon the *Heart*, you may perceive something to enter into the *Heart*, and that the *Heart* becomes fuller, which *Harvey* observed: and *Waleus* has observed, that the Earlet has pulsed seventy, sometimes an hundred Pulses, before that any motion of the *Heart* followed. § 3. This motion of the *Heart* consists in *Systole* or Constriction, and in *Diastole*, or Dilation. § 4. In the Constriction or Pulsion of the *Heart*, the point of the

Heart draws nearer to its *Basis*, by which the *sides* of the Heart, seated against the right and left Ribs, do come nearer one to another, whilst the side of the Heart against the *Sternum* is lifted up, and especially towards the *Basis*, whereby that part near the *Basis* being lift up, seems most of all to smite the Breast, and make that beating which we feel. And this is manifestly to be seen, if you either cut off the Tip of the Heart, or cut it asunder a thwart through the middle; and if you put your Finger into the hole, you may feel the Ventricle contract themselves upon your Finger. § 5. By this *Constriction* or *Pulsion* the Blood is forced out both into the Lungs by the *Arteria Pulmonalis*; and into the Arteries by the *Aorta*: after this the point of the Heart returns, and the Heart remains in its quiet and natural state. § 6. But *Dia-stole* is when out of the *Vena Pulmonalis*, and the *Vena Cava*, new Blood is forced into the Heart, the Blood therein is rarified by heat; so that the upper side rises, and the other sides (as aforesaid) remain extended, then is the Heart in its *Dilatation*; besides which no other *Dilatation* of the Heart is to be observed.

XV. Out of the Lungs, the Blood is sent by the *Vena Pulmonalis* into the left Earlet of the Heart, and so into the left Ventricle of the same, where we first found it, at Sect. IX. aforesaid; whereby its circular motion is clearly and completely absolved.

§ 1. In persons of firm Age

the *Foramen Ovale* (by which the Blood in a Child in the Womb goes from the *Vena Cava* to the right Ventricle of the Heart, and by the *Vena Pulmonalis* immediately into the left) is not usual to be seen, or to remain pervious, but degenerates into a Ligament. § 2. The *Septum* or partition of the Ventricle of the Heart being solid and impervious, altogether denies a passage of the Blood that way; so that by neither of these ways can the Blood get into the left Ventricle. § 3. From hence we infer, That the Blood Issues out of the right Ventricle into the *Arteria Pulmonalis*, and so into the Lungs, and from thence by the *Vena Pulmonalis* into the left Ventricle; and this seems to be so much the greater a Truth, because of the three *Sigmatoidal Valves*, which give it place to rush forwards, but withstand its return. § 4. If you cut asunder the *Septum*, and view the left Ventricle, you will find into two entrances of it two Channels to be inserted; on this side the *Vena Pulmonalis*, on the other side the *Aorta* were placed, and at the boundings of both were placed *Valves*: the *Aorta* has three *sigmatoidal Valves*, to give way to the Blood thrust out: the *Vena Pulmonalis* has two Miter-like Valves, to give entrance to the Blood into the left Ventricle, and to stop it from going back. § 5. If you bind with Ligatures both the the *Arteria Pulmonalis*, and *Vena Pulmonalis*, as near to the Lungs as is possible; the *Arteria Pulmonalis* will be exceedingly dilated be-

between the Heart and the Ligature: And beyond the Ligature towards its farthest branches, it will become flaccid and empty: But in the binding of the *Vena Pulmonalis*, you will find the contrary parts both to swell and fall. § 6. From all these considerations joyntly considered, no man can justly deny the passage of the Blood into the left Ventricle, as aforesaid. § 7. The Blood being now come into the Fountain where we first found it, is again moved into the Arteries, partly by the way of Pulsion or driving, and partly by attraction before described, from whence it goes again into the Veins; then into the Liver and Heart, and so makes as it were an eternal round.

XVI. *The Ends and Uses of this Circulation declared.*

§ 1. The uses of this Circular motion of the Blood are many, first, to serve for the strengthening and preservation of the whole Body in general, and all its parts in particular. § 2. Secondly, for the preservation of the Blood in its purity and integrity, and freeing it from corruption or putrefaction: for it is seen that standing Waters soon corrupt and stink, which is most true of the Blood, when we see it any where stagnating, or extravasated, so as it cannot circulate. § 3. Thirdly, That it might

be perpetually made better, by a continually reiterated concoction and digestion in its passage through the Liver; and by being rarified and attenuated with such a continual motion; which is not much unlike to the Chymical Circulation, whereby Spirits are made more subtil and perfect. § 4. Fourthly, That by such a motion, attaining a high degree of perfection, it might at last become fit for the generation of Spirits; 1. *Vital*, which being generated in the Heart, give Life to the parts of the Body. 2. *Animal*, which (out of the Vitals elaborated in the Brain) give sense and motion to the Body. 3. *Natural*, (out of the Blood contained in the smallest Arteries, and carried right out into the mass of Flesh,) which constitutes that nameless humor, called by some *Ros, Gluten*, and *Cambium*, causing an agglutination and assimilation of matter to the parts.

Veslingi Syntag. Anat. cap. 20.

Thus hast thou the Scope of Nature, in the forming of man, whereby the Name and Power of the Wise Creator is held forth; so that thou maist cry out with Panaretes,

HE IS ALL THINGS.

CHAP.

CHAP. XIII. *Of Anatomick Terms.*

1. **A** Bdomen, the lower Ventricle, Belly or Paunch.
2. Abducens, a Muscle drawing from a part.
3. Acetabulum, from its form, being much like a Sawcer.
4. Acromium, the Apophysis, tip, or upper part of the Shoulder-Blade.
5. Adducens, a Muscle drawing down a part.
6. Adeen, it is a Cartilage or Gristle.
7. Adjutorium, the Shoulder or Arm-Bone, so called from being helpful.
8. Adnata tunica, the common Tunicle of the Eye called Conjunctiva.
9. Ala, the upper part of the Auricula.
10. Alare, from being like a wing.
11. Albuginea, the third and innermost Coat of the Testicles.
12. Alvearium, the place where the Ear-wax is bred.
13. Amatorij, the Lovers Muscles belonging to the Eye.
14. Amnios, one of the Membranes infolding the Child in the womb, so called from its softness and thinness.
15. Amydalæ, the Tonsils or Almonds of the Ear.
16. Anastomosis, the opening of the Mouths of Veins or Arteries: or mutual Conjunction of the Mouth of Veins and Arteries.
17. Ancon, the bending of the Elbow.
18. Ancoriformis, from being crooked or Anchor-like.
19. Ancyroides, that which is Anchor-like.
20. Aniscalptor, a Muscle called the Arse-clawer.
21. Anthropologia, a description of the whole Man, Body and Soul.
22. Anthelix, the inner part of the external Ear, called Scapha.
23. Antithenar, a Muscle which moves the Thumb contrary to the Thenar.
24. Antiades, the Amygdalæ, Tonsillæ, or Almonds, of the Ears.
25. Apophysis, a Tubercle or promineny, springing from and being one with the Bone it self.
26. Aorta, Arteria magna, the great and chiefest Artery, coming from the left Ventricle of the Heart.
27. Aponeurosis, it is a similar spermatick part called a Tendon.
28. Aranea Tunica, the third proper Tunicle of the Eye called Retina.
29. Arcola, the Circle about the Nipple of a Womans Brest.
30. Arrhypes, the eleventh Vertebra of the back, so called because its spine is straight.
31. Arteria, a certain hollow Vessel like a Pipe carrying Blood from the Heart, to all parts of the Body.
32. Arteria Pulmonalis, the Vessels sending Blood out of the right Ventricle of the Heart into the Lungs.
33. Arteropoietice, the proper Artery-making faculty.

34. *Arthrodia*, is an *Articulation* where the *Cavity* retaining is superficial, and the *process* or *Head* flat, as in the *hinder part* of the *Head* with the *first Vertebra* of the *Neck*.
35. *Arthrosis*, a *conjunction* of *Bones* by *joynting*, for *motion*.
36. *Arytenoides*, because it *begins* and *ends* in the *Ewer-like Cartilage*.
37. *Aspera Arteria*, the *rough Artery*, or *Wind-pipe*.
38. *Ascites*, a *Dropsy* of the *Belly*, so called.
39. *Asphalites*, the *under-propper*, the *fifth* and *last Vertebra* of the *Loyns*.
40. *Astragalos*, the *Game-Bone* of the *Instep*.
41. *Attolens*, a *Muscle* *lifting up* the *part*.
42. *Auricula*, the *external Ear*.
43. *Axillaris*, because it *belongs to* the *Arm*, from *Axilla*, the *Arm-hole*.
44. *Axis*, the *third Vertebra* of the *Neck*, because it *turns upon it*.
45. *Axungia*, a *kind of Grease* or *soft Fat*.
46. *Azygos*, *Vena sine pari*, a *flitary Vein*, or *Vein without a Fellow*.
47. *Balanus*, the *head* or *nut* of the *yard*.
48. *Balista*, the *Game-bone* of the *Instep*.
49. *Basioglossum*, a *Muscle* *arising out of* the *lower parts* of the *Tongue*.
50. *Biceps*, That which has *two heads* or *beginnings*.
51. *Bicornis*, having *two horns*, *Storks*, or *Leos*.
52. *Brachia us*, a *Muscle* *belonging to* the *Arm*.
53. *Bregma*, the *Fore-part* of the *head*.
54. *Bronchus*, from its *exemplification* or *branchings out*, it is the *lower part* of the *Wind-pipe*.
55. *Bubonis*, the *lateral part* of the *Hypogastrium*, or *lower region* of the *Belly*.
56. *Bucca*, the *minor part*, or *hollow* of the *Cheeks*.
57. *Buccinator*, a *Muscle* of the *Cheek*, call'd the *Trumpeters muscle*, from *Buccina* a *horn trumpeter*.
58. *Buccula*, the *fleshy* or *swelling part* under the *Chin*, not far from the *Throat*.
59. *Calamus Scriptorius*, the *noble Ventricle* of the *Brain*.
60. *Calcaneum*, the *Heel-bone*, called *Pterna*.
61. *Capreolus*, the *outward part* of the *Auricula*.
62. *Capsula atribiliaria*, *black choler cases*, supposed to hold *Melancholy*.
63. *Carpus*, the *Wrist* which *joynes* the *Cubitus* and *hand*.
64. *Caro* is the *flesh* of *man* or *beast*.
65. *Carotides*, certain *sleepy Arteries* and *Veins*: it is derived à *καρ* (profound sleep) which comes from *καρ*, *caput*, *cujus est affectio*.
66. *Cartilago*, is a *simular part* call'd a *Gristle*.
67. *Caruncula*, a *little piece* of *Flesh* sometime *Glandulous*.
68. *Cephalopharingæus*, because it *begins where* the *head* is *joyned to* the *Neck* by the *first Vertebra*, and is *inserted into* the *Pharynx*.
69. *Ceratoglossus*, because it *arises from* the *points* of the *bone* of the *Tongue*, and is *inserted into* the *Tongue*.

70. Cerebrum, the brain in man or beast.
71. Cerebellum, the little brain, or brain in the hinder part of the head.
72. Cervicalis, which belongs to the Neck, or its Verrebræ.
73. Cerumen, is Earwax.
74. Choledochus, a passage carrying the biler into the Jejunum.
75. Chondrostandeimus, they are certain gristly Ligaments.
76. Chorion, the second Membrain insolding the child in the womb.
77. Choroides, the second proper Tunicle of the Ey, call'd Uvea.
78. Chylus, the first concoction & digestion of the food.
79. Cilia, the hairs of the Ey-lids.
80. Ciliaris, a muscle so called, because 'tis much like the hair of the Ey-brows.
81. Circumactores, the rowling Muscles of the Ey.
82. Clavicula, the Collar-bones: so called, because like keyes they shut up the breast.
83. Coccyx, the Crupper bone, or Rump-bone.
84. Cochlea, the innermost Cavity of the External Ear.
85. Cæcum, a blind Gut between the Ileon and Colon.
86. Collum, the Neck so called, because (instar collis) like a Hill it arises out of the Body.
87. Colon, the gut following the Cæcum, & is the principal great Gut; so called πᾶς τὸ κορυβαί, because it detains the excrements.
88. Columna, The Proceß called Uvula or Gargarcon hanging over the tongue.
89. Columnæ carneæ, fleshy fibres or Columnes in the heart.
90. Complexus, the Muscle accompanying the Splenius or muscle shaking the head.
91. Concha, the Cavity of the Ear.
92. Conjunctiva, the common tunicle called Adnata.
93. Condylus, a lower kind of Apophysis or prominency.
94. Constringentes, muscles of the Nose which draw it together.
95. Cor, the heart, so called, à currendo, from running or continually moving.
96. Coracohyoides, because it arises from the process of the shoulder blade like the Crows bill, and is inserted into the Os Hyoides, or bone of the Tongue.
97. Coracoides, that which resembles a Crows-Bill.
98. Cornea, the first proper Tunicle of the Ey, call'd the berney.
99. Coronaria, a Vein and Artery, being two of the Vessels of the Heart.
100. Corone, the process of the lower Jaw.
101. Corpus Callosum, the whitest and most solid substance of the Brain.
102. Cotoioides, the same with Acetabula, or Samcers.
103. Coxa, the hoop or flank bone, called os innominatum; it consists of 3 Bones, viz. 1. the Ilion, 2. the Ischion, or Coxendicis, 3. the Pubis.
104. Coxendix, the Os Ischion, or Hip bone: placed between the Ileon, & Pubis or Share-bones.
105. Cranium, the skull from καὶ ὡς an Helmet.
106. Cremaster, a muscle which upholds the stones.
107. Cribriforme, the Ethmoides or sieve-like bone of the Nose.
108. Cribrum, from being like a sieve; by this is intended the Strainers of the Veins in the Kidnies.

109. Cricoarythenoideus, because it begins at the ring-like, & ends at the Ewer-like Cartilage.
110. Cricoides, the Annular, or Ring-like finger.
111. Cricothyroidæus, because it arises from the Ring-like, and is inserted into the Thyroides.
112. Crinis, the hair in any part of the body.
113. Crotaphites, the temporal muscles, which are cover'd by the Pericranium.
114. Cruralis, because it belongs to the Thigh and Leg.
115. Crystallina, the third proper tunicle of the Ey, called Aranæa, or Retina.
116. Cubitus, the Elbow.
117. Cubitæus, belonging to the Cubit or Elbow.
118. Cuboides, a bone of the Instep, cube-fashioned.
119. Cucullares, a muscle of the shoulder-joynt so called because it resembles a hood.
120. Cuneiforme, the Os Palati, or wedge-fashioned bone, also bones of the Instep.
121. Cuticula, the scarf skin which covers the Cutis.
122. Cutis, is the skin of man, beast or fowl, which lies next and immediately under the Epidermis or scarf skin.
123. Cystis Choledochus, vesicabiliaria, the Gall-bladder.
124. Cystica, belonging to the bladder, from
125. Cystis the bladder.
126. Dartos, one of the Membranes of the Testicles.
127. Delphys, the Vulva or external Privy.
128. Deltoides, because it resembles the Greek Letter Δ Delta.
129. Deprimens, a Muscle depressing a part.
130. Derma, the Skin of a Man or Beast.
131. Diaphragmatica, a Vein passing through the Diaphragma or Midriff.
132. Diapedesis, a kind of Sweating through the Pores.
133. Diaphragma, the Midriff, a kind of Muscle placed cross the Body.
134. Diarthrosis, is a loose and manifest Articulation, as in the Fingers, and other moveable Joynts.
135. Diastole, the motion of the Heart wherein it dilates and enlarges it self.
136. Diazoster, præcingens, the Girder, the twelfth Vertebra of the Back.
137. Didymoi, the Testicles or Stones in Man or Woman.
138. Digastricus, having a double Belly, from Gastrum, a great Bellied thing.
139. Dilatores, Muscles which are openers or wideners.
140. Duodenum, the Gut following the Pylorus, so called because the Antients thought it to be 12 Inches long.
141. Dura Mater, the harder Mening or Membrane of the Brain, and that which is next the Skull.
142. Elystroides, one of the Coats or Tunics of the Scrotum or Cods.
143. Emuigentes, two large Veins, and Arteries, which spring from the Trunk of the Vena Cava, & Aorta, and are planted into the hollow part of the Kidneys: so called, from their Action, because they (as it were) Milk out the Urine.

144. Emunctories, *Kernels situated by the Tongue, Larynx, Eyecorners, Ears, Neck, Arm-pits, Groyns.*
145. Enarthrosis, *is an articulation when the Cavity receiving the Bone, and the process to be received are both great.*
146. Entera, *the Intestines or Guts, they begin at the Pylorus and end at the Anus.*
147. Epidermis, *the Scarf-skin which lyes outwardmost, and covers the dermis.*
148. Epigastrium, *the uppermost of the 3 Regions of the Abdomen.*
149. Epiglottis, *a Cartiliginous Membrane like a little Tongue, placed in the inner part of the Throat, which closeth the Wind-pipe.*
150. Epiphyfis, *a certain bearing or growing out upon a Bone, by way of appendix.*
151. Epiploica, *so called from Epiploon, the Omentum, or Caul.*
152. Epistrophæus, *the second Vertebra of the Neck so called from turning.*
153. Erectores, *Muscles of the Nose, which open or widen it.*
154. Erythroides, *the second proper Coat of the Testicles.*
155. Ethmoides, *Cribriforme, the Sieve-like Bone of the Nose.*
156. Eusplanchnous, *that is one of Sound Bowels, or Entrails.*
157. Falx, *the Sickle-like process of the Brain.*
158. Fascia, *because it resembles a Band or Garter.*
159. Femur, *à ferendo dictum, is the Thigh.*
160. Fibra, *it is a similar, sper-*
- marick part, dispersed through the skin, flesh and Membranes, like threads.*
161. Fibula, *the lesser Bone of the Leg called Perone.*
162. Fistula Uterum, *the Water Pipes of the Ureters, commonly in number ten.*
163. Flexor, *a Muscle causing a part to bend.*
164. Fornix, *the arched Vault, being the lower whitish part under the Corpus Callotum, where the Ventricles are joyned.*
165. Frons, *the Forehead, so called à ferenda from carrying or bearing.*
166. Fundus, *the bottom of any thing, but here chiefly of the Womb.*
167. Galgulus, *the yellow Faundice.*
168. Gargareon, *the process called Uvula or Columna, hanging over the root of the Tongue.*
169. Gaster, *the Stomach, called also Ventriculus, Stomachus, and Colia, from its Cavity.*
170. Gastrica, *because it belongs to the Belly.*
171. Gastrocnemius, *because it makes up the Calf of the Leg.*
172. Gastroepiploica, *so called from the Belly and Omentum, which is called ἐπιπλόον, Epiploon.*
173. Gelasimoi, *the fore-Teeth, Grinders or Laughing-Teeth.*
174. Gemelli, *the Testicles or Stones in Man or Beast.*
175. Gemellus, *from being double, or having two Heads.*
176. Genioglossus, *because it has its begining from the Chin, and is inserted into the Os Hyoides, or Bone of the Tongue.*
177. Geniohyoides, *the same with*

- Genioglossus, as arising from the Tongue and Os Hyoides.
178. Gingiva, the Gums which fasten in the Teeth.
179. Ginglymus, when the same Bone receives, and is received, as is seen in the Hinges of Doors and Windows.
180. Glans, the Head or Nut of the Yard.
181. Glandula pituitaria, the Rheum-Kernel in the Head, receiving the Excrements of the Brain.
182. Glandula pinealis, so called from its likeness to the Pine-Aple.
183. Glandules, certain Kernels scattered up and down the Body.
184. Glenai, or Glenoides, a kind of Acetabula, but only they are more shallow.
185. Glottalis, and Glottoides, Muscles belonging to the Throat, Wind or Wind-pipe.
186. Gluteus, because it maketh up the Buttocks.
187. Gomphosis, the joining of Bones as it were by nailing, when one Bone is fastned into another.
188. Gracilis, from being small, lean, thin, or slender.
189. Graphyoides, the insculping Muscle, making hollow like a Belly.
190. Guttalis, the third Gristle of the Larynx.
191. Harmonia, the joining of Bones by a single-line.
192. Helix, the outward circumference of the Auricula.
193. Hepar, Jecur, the Liver.
194. Hæmorrhoides, Veins which often bleed at the Fundament, so called from their bleeding.
195. Humeraria, belonging to the Arm, from
196. Humerus, the Arm or Shoulder.
197. Hymen, a kind of Membrane, also the mark, sign, or token of Virginity.
198. Hyothyroidæus, because it springs from the Bone of the Tongue, and is inserted into the Buckler-like Cartilage.
199. Hypochondrium, the sides of the upper region of the Belly called Epigastrium.
200. Hypogastrium, because it belongs to the lower part or region of the Belly.
201. Hypothenar, Subvola, because it belongs to the upper part of the Hand.
202. Hypsioglossus, because it arises from the Os Hyoides, and is inserted into the Tongue.
203. Jecur, the Liver, quasi juxta Cor, as if you should say near the Heart.
204. Jejunum, the hungry Gut, which immediately follows the Duodenum, and goes before the Ileon.
205. Iliacus, because it arises from the internal Cavity of the Os Ilium.
206. Ilion, an Apophysis of the Os Sacrum, called the Huckle-Bone, it is taken from an acute Disease called Ileos, miserere mei, the Iliack passion, ἀὐλῆς, misericordia, quod dolor sit miserandus.
207. Incus, the Anvil, a Bone so called in the Ear.
208. Infundibulum, called Pelvis, the Bosin, is an ample Cavity in the Ureter: also a Cavity in the Brain.
209. Inguina, the lateral parts of the

- the Hypogastrium, or lower region of the Belly.
210. Inosculationes, these are entrances of one Vessel into another called Anastomoses.
211. Intercostralis, which belongs to the spaces between the Ribs.
212. Internodij, places between the Joints.
213. Interossæi, Muscles which go between the Bones in the Hands and Feet.
214. Intestina, the Guts which begin at the Pylorus, and end at the Anus.
215. Inverecundum, the Bone of the Forehead, because it is without shame.
216. Ischias, or Ischiatica, because it belongs to the Hip, or Huckle-Bone, from ἰσχίον, the Hip.
217. Iris, a Circle in the Eye having in it all sorts of Colors.
218. Jugulum, the forepart of the Neck where the Wind-pipe is: the Throat, or Neck.
219. Kardias, the Heart, called in Latin, Cor, à currendo, from running, or continually moving.
220. Kephale, the Head of any thing Man or Beast.
221. Kricocoides, the Annular or ring-like Gristle of the Larynx.
222. Labyrinthus, the second Cavity of the internal Ear.
223. Lachrymale, from Tears or Weeping.
224. Lactææ, Veins of the Mesentery which arise from the Guts, and run to several other parts.
225. Lambdoides, because it represents the Greek letter Λ Lambda.
226. Larynx, it is the beginning of the Wind-pipe, and derived from λαρυγγίζειν, which is to stune or hollow with an open Mouth: it is framed of four Gristles, viz. Thyroides, the Buckler-like, two Arytenoides, Ewer-like; and Cricoides, ring-like.
227. Levator, a lifter up.
228. Lien, the Spleen or Milt.
229. Ligamentum, it is a band or tie, adhering firmly to the Bones, and tying the parts of the Body mutually together.
230. Lingua, the Tongue, so called à Lingendo from Licking.
231. Liphia, the first Vertebra of the Back.
232. Lobus, the lower part of the Auricula, or external Ear.
233. Lumbaris, because it belongs to the Loyns.
234. Lumbricales, Muscles resembling Worms, both for form and motion.
235. Lympha, a watery and viscous juice of the Blood.
236. Lymphaducts, the Vessels which carry the Lympha asort named, in manner of Veins.
237. Mallæus, the Hammer, a Bone so called in the Ear.
238. Mamma, the Breast of Man or Woman.
239. Mammaria, or Mammillaris, which belong to the Breasts.
240. Mammillæ, the Breast or Dugs of a Woman.
241. Mandibularis, a Muscle belonging to the Jaw-bone.
242. Manforius primus, the same with the former.
243. Maschalister, the Arm-pit Vertebra, being the second of the Back.
244. Masseter, because it serves for Eating.
245. Masticatorij, Muscles so called

264. Mitrales, the Miter-Shaped Valves.

165. Molares, the Grinding-Teeth.

266. Molitor, the chief chewing
Muscle, called Masseur.

267. *Mucrones*, from being sharp pointed, *Bodkin*, or *Sword-like*.

268. *Musculus*, an Instrument serving for motion; in Mans Body, it serves for voluntary motion.

269. Myloglossus, because it has its beginning at the root of the Grinders of the lower Jaw, and is inserted into the Tongue.

270. Myrinx, the Tympanum, or Membrane of the Brain.

271. *Myrtax, the upper Lip.*

272. Nares, the Nostrils.

273. *Nasus*, or *Nasum*, the *Nose*:

274. Nephrites, the first Vertebra of the Loins, so called from

275. Nephroi, Renes, the Kidnies
from $\delta\sigma\omega$ to flow.

276. Nervea, the third and inmost coat of the Testicles.

277. Neuron, or Nervus, a Nerve
or Sinew, whence

278. Neurotica, things which belong to the Nerves.

279. Occiput, the hinder part of the head.

280. *Oculus, the ey, also the sight
of the eye, ab occultando, from
shutting or hiding.*

281. *Odontoides*, because it resembles a tooth, from

282. Odontes, *Dentes, the Teeth.*
283. Oesophagus, *the gullet, or*

284. Olecranon, *quasi* ὀλερῶν κρ.

вов, Caput cubiti, the head or upper part of the Elbow.

285. Omentum, the Caul, from
Opimus, *quasi* Opimentum. fat.

H h h h neß :

- ness: or, ab omento, i.e. supra
manco. because it is spread over
all the Intestines.
286. Omoplate, the Scapula or
Shoulder blade.
287. Operimenta, a kind of Mem-
brane or tunicle.
288. Orbicularis, a Muscle belong-
ing to the Eye, so called from its
circular form.
289. Os, oris, the mouth of man
or beast.
290. Os, ossis, the bones of all liv-
ing Creatures. Sometimes also the
stones of fruit, as of Dates.
291. Palatum, the Vault or roof of
the Mouth.
292. Parastatae, Vessels assisting to
the perfecting and finishing the
Seed.
293. Papilla, the nipple or teat of
a womans breast.
294. Paristhmia, the Amigdalæ or
Almonds of the Ear.
295. Palpebræ, the Ey-lids.
296. Palmaris, a Muscle belonging
to the Palm of the hand.
297. Parenchyma, the flesh of the
Inwards, as of the Lungs, heart,
liver, spleen, kidneys.
298. Paraphrenitis, a kind of ba-
stard Phrensy.
299. Parotides, Glandules or Ker-
nels behind the Ears.
300. Panniculus carnosus, is a
fleshy Membrane, called by some a
membranous Muscle.
301. Patella, the knee-pan, so call'd
from being like a little dish, basin
or porringer.
302. Pancreas, the Sweetbread,
being a kind of glandulous sub-
stance.
303. Parietalia: the bones of the
Temples, or forepart of the head.
304. Paxillare, the Wedg-like bone
of the Palate.
305. Pectineus, a Muscle so call'd
because it resembles a Comb.
306. Pelvis, a basin, a place in the
Cranium, and the place where
the bladder lies: it is also the
Infundibulum or the ample ca-
vity of the Ureter.
307. Penis, the Yard, a penden-
do from hanging down.
308. Pericardium, the Cystis or
Membrane enclosing the heart.
309. Pericranium, a membrane
thin & soft, compassing the skull.
310. Perineum, the distance be-
tween the Podex and Cods.
311. Perioftion, a Membrane, un-
der the Flesh, next to and imme-
diately covering the bone.
312. Perisystole, the rest or quiet
of the heart between the two Mo-
tions of Systole and Diastole.
313. Peroneus, because it belongs
to the Shin-bone.
314. Peritonæum, a large Mem-
brane overspreading the Abdo-
men or belly, so call'd from spread-
ing over, and stretching about.
315. Pharynx, is the Throat it self.
316. Philtrum, the gutter on the
upper lip under the nostrils.
317. Phleps, is a simular spermatic
part. commonly called a Vein.
318. Phrenica, the Medris Vein,
called also the Diaphragmatica.
319. Pia Mater, the thicker and
inmost Mening or Membrane of
the Brain immediately infolding
the brain it self.
320. Pimele, that kind of fat which
is called Axungia, Pinguedo,
or grease.
321. Placenta, the Womb-cake;
called also Hepar uteri, the womb
Liver, from its Nature and Of-
fice.
322. Plantaris, because it be-
longs to the foot.

323. *Pleura, a Membrane, so call'd, the Tunicle covering the Ribs.*
 324. *Pleurai, costæ, the Ribs, which are the lateral parts of the Thorax.*
 325. *Pleuritai, the eight costal Vertebra next after the first and second.*
 326. *Plexus choroides, a Plexur which belongs to the sole of the foot, or net in the head, so call'd because tis Chorion-like.*
 327. *Plexus Retiformis, a knitting or weaving together in form of a Net.*
 328. *Pneumones, & Plenmones, the Lungs or Lights.*
 329. *Podex, the Anus or Fundament.*
 330. *Poplitea, because it belongs to the Ham and Gartering place.*
 331. *Pollex, the Thumb or great Toe.*
 332. *Polymorphon, the bone of many sides, called Cuboides, diaphan'd.*
 333. *Præputium, the fore-skin of the yard, which the Jews cut off in Circumcision, a putando from cutting off.*
 334. *Processus mammillares, certain knobs or branches out of the brain.*
 335. *Prolabia, the Extuberancies or Prominencies of the Lips.*
 336. *Prostatae, Scanders before, stoppers, or Conductors: they are two certain Caruncles, situate at the root of the yard, above the Sphincter, whose use is to contain a viscus & slippery humor to moisten the Urethra, for the more easy passage of the Seed.*
 337. *Ploa, a great Muscle of the Thigh, so called because of its softness, or that its wing is clipp'd in embracing.*
 338. *Psychologia, a Description of the Soul.*
 339. *Pterna, the Heel-bone.*
 340. *Pterygoides, from being like a wing.*
 341. *Pterystaphylinus, so called because it proceeds from the Pterygoiodes and is in form like a wild Parsnip or Carrot.*
 342. *Pubes, the Shave, whence os pubes, the Shave-bone.*
 343. *Pulmones, the Lungs, so called a respirando from breathing.*
 444. *Pulsus, the beating of the Vital spirits in the heart and Arteries.*
 345. *Puppis, the Stern of a ship, the place of Government or Judgment, whence the forehead is so called.*
 346. *Pupilla, the Apple, or sight of the Eye.*
 347. *Pylorus, the Porter, or right Orifice of the Stomach, over which the Chylus passes into the Duodenum.*
 448. *Pyramidales, Muscles in form of a Pyramid or Pear.*
 349. *Quadratus, a Muscle belonging to the Lips, Cheek, Chin, and Neck, so called from its form.*
 350. *Quadrigeminus, because it is as it were four-fold.*
 351. *Quatrio, the Game-bone of the Instep, called Astragalos.*
 352. *Radius, so called from Radius, a Bone belonging to the Cubit or lower part of the Arm.*
 353. *Raninae or Ranulares, frog-like Veins under the Tongue.*
 354. *Rectum, the Arse-Gut so called, which immediately succeeds the Colon.*
 355. *Renes, the Reins or Kidnies.*
 356. *Rete mirabile, a wonderful*

- plexure of Veins and Arteries in the Head shewing like many Nets heaped up together.
357. Retina, the third proper Tunicle of the Eye called Aranea or Crystallina.
358. Rhomboides, because it is like the Geometrical figure Rhombus, having four parallel lines, but not the sides equal.
359. Rhombus, a figure of 4 sides whose Lines are all equal, and their opposites parallel.
360. Sacrum, a Muscle so called because it arises from the Os Sacrum.
361. Sacrolumbus, a Muscle springing from the Os Sacrum, and Lumbar processes.
362. Sagitalis, from being Arrow-like.
363. Salvatella, a Vein between the Little-finger and Ring-finger.
364. Saphena, a Vein so called from its perspicuity or plainness to be seen.
365. Sarx, the flesh of Man or Beast.
366. Sævum, so called from being great, mighty, and strong.
367. Scalenus, so called from the inequality of its sides, or because it runs oblique.
368. Scaphoides, a bone so called from its boat-like shape.
369. Scapha, the hollow part of the Auricula resembling a boat.
370. Scapularis, belonging to the Shoulder-blade.
371. Sclitotica, the first proper Tunicle of the Eye, called the Horney.
372. Scrotum, the Cod, or bag containing the Testicles.
373. Scutiformis, from being shield-shaped.
374. Secundine, the After-Birth, composed of the Membranes Amnios and Chorion, and the Placenta or Womb-cake.
375. Septum Cordis, the Partition on which divides the Heart into two Ventricles.
376. Septum Lucidum, a wrinkled partition skin distinguishing the Ventricles of the Brain.
377. Septum Nasi, the Bone which holds up the ridge of the Nose, or divides the two Nostrils.
378. Septum, a divider of any thing into two parts, as the Septum Nasi, Septum Cordis, Septum transversum or Midriff.
379. Serosities, watery humours dispersed in any part.
380. Serratus, a Muscle much resembling a Saw.
381. Serum, the watery part of the Blood.
382. Sesamoidea, Bones so called from their likeness to Sesamum Seeds or Turkey Miller.
383. Sigmoides, because it is like the Greek letter Σ Sigma.
384. Sinciput, the forepart of the Head.
385. Sinus pudoris, the long Channel or Neck of the Womb, situate between the Vulva, and internal orifice.
386. Sphæno-pharyngæus, because it springs from the Wedg-bone, and is inserted into the Pharynx.
387. Sphænoïdes, so called because it is the Wedg-like bone.
388. Sphincter, a Muscle so called, because it draws together, or shuts an Orifice.
389. Spinatus, from sharpness, or being Thorn-like; it is placed by the sharp brim of a bone.
390. Splenius, or Splenicus, because

- cause is resembles the Spleen: also a Muscle shaking the Head.
391. Splen, Lien, the Spleen or Milke.
392. Spongoides, the Cribiforme, or Sieve-like Bone of the Nose.
393. Spondyloi, the Vertebrae of the back-bone.
394. Stapes, a Stirrup, a Bone so called in the Ear.
395. Stear, that kind of hard Fat, which is called Suet.
396. Sternitides, pectorales, the breast-Ribs, or 3 lowest of the Legitimate Ribs.
397. Sternohyoidæus, because it arises from the Sternum, and is inserted into the Os Hyoides.
398. Sternothyroides, because it arises from the Sternum or breast-bone, and is inserted into the thyroides, or Scutiformis, the Shield or Buckler-like Cartilage.
399. Sternum, the Breast-bone, called also Os pectoris, Gladiæ, & Ensi-forme.
400. Styloceratomyoidæus, because it springs from the Bodkin-like process, and is inserted into the points of the Tongue; or Hyoides.
401. Stylopharyngæus, because it begins at the Bodkin like process, and is inserted into the Pharynx.
402. Styloides, because it represents a great Pack-needle or bodkin.
403. Subclavius, because it arises under the Clavicula or Collar-bone.
404. Succenturiati Renes, Auxiliary Kidnies.
405. Suralis, which belongs to the Calf of the Leg; from Sura, the hind-part of the Leg.
406. Supercilia, the Eye-brows; also the upper brows of the Cavities of the Joynts.
407. Sutura, a joyning of Bones by Indenture, as if Teeth were thrust one against another.
408. Symphyfis, a natural union or growing together of bones.
409. Synchondrosis, it is a connection or conjunction by interposition of an intermediate Body.
410. Syndismos, it is a Ligament, Band or Tye.
411. Synarthrosis, is an Articulation of bones, with a motion doubtful or obscure, as is that of the Ribs with the Vertebrae; the Bones of the Wrist and Pedium with the adjacent.
412. Syneurosis, a Conjunction of Bones made by a Ligament, as in the Hip Bone with the Thigh Bone.
413. Syllarcosis, a conjunction of bones made by flesh or a Muscle.
414. Systole, the motion of the Heart wherein it contracts itself.
415. Talus, the Game-bone of the Instep.
416. Tarsi, the Hairs on the Eyelids.
417. Tarsus, the Instep joyning to the Foot.
418. Tegumenta, a kind of Tunicle or Membrane.
419. Tendo, a sinular, spermatick part, of a nervous like substance, called a Chord or Tendon.
420. Tessera, the Cube-like bone of the Instep.
421. Testis, the Stones in Man, Woman, or Beast.
422. Testudo, the Fornix, or vaulted Arch of the brain.
423. Thenar, is said to be the fleshy part of the Hand, between the Thumb and the middle finger.
424. Thorax, the breast or Stomach,

- so called from its likeness to a breast-plate.
425. *Thymus*, a glandulous substance or Kernel in the Throat-pit.
426. *Thyroides*, the Shield-like Cartilage of the Larynx, called *Scutiformis*.
427. *Thyrocricoides*, because it arises from the lower part of the *Thyroides* or *Scutiformis*, and ends in the *Cricoides* or *Annularis*, that which is ring-like.
428. *Thyroarytenoidæus*, because it begins at the *Thyroides*, or buckler-like Cartilage, and ends at the *Arytenoides*, or Ewer-like Cartilage.
429. *Tibia*, the Shank or Leg below the Knee; it also signifies the greater scapula or bone thereof.
430. *Tonsillæ*, the Tonsils or Almonds of the Ears.
431. *Trapezitis*, because it resembles a Geometrical figure of four unequal lines.
432. *Trachea*, the Wind-pipe, called also *Aspera Arteria*.
433. *Triceps*, a Muscle having 3 heads or beginnings.
434. *Trigeminus*, because it has 3 several Heads or beginnings.
435. *Tricuspides*, Valves which are treble pointed.
436. *Triparsitus*, a Muscle of the Ear, which is said to be threefold, or rather may be divided into 3 parts, because it has three insertions.
437. *Trochanter*, pars *puppis*, *Coxæ Caput*, so called from resembling a Pivety.
438. *Tubuli Uterini*, the water-pipes of the Uterus, commonly in number ten.
439. *Tunica*, a Membrane or Coat.
440. *Tunica Ciliaris*, a Thread-like substance, or texture of Filaments, being a Ligament under the Circle of the Uvea.
441. *Tympanum*, the Drum of the Ear; also one of its Cavities.
442. *Vagina Uteri*, the Neck of the Womb, Sheath, or Scabbard.
443. Valves, certain kind of shutts within the Veins, Arteries, and Lymphaducts, which hinder the Blood from running back.
444. *Vasa preparantia*, or *Spermatica*, the Vessels preparing the Seed.
445. *Vasa deferentia*, the Vessels carrying the Seed.
446. *Variciformia*, the Parastates so called from their resembling Varices, whence also they are called *Corpora Varicosa*.
447. *Vastus*, a Muscle so called either from its being exceeding great, or from being solitary.
448. *Vena*, it is a similar, spermatick, hollow part, like a Pipe, carrying Blood from all parts to the Heart.
449. *Vena Pulmonalis*, the Vessels sending the Blood out of the Lungs into the left Earles and Ventricle of the Heart.
450. *Vermiformis*, because it is worm fashioned, two processes in the Brain.
451. *Vertex*, the top or Crown of the Head.
452. *Vertebra*, ex *Vertendo*, a turning Joynt, as are those in the back.
453. *Vesica*, a Bladder, as those of the Gall and Urine.
454. *Vesiculæ Seminales*, the little Bladders containing the Seed.
455. *Vitreæ*, the fourth proper Tunicle of the Eye, which covers the glassy humor.
457. *Ulna*

456. Ulna, the lower part of the Arm, called also the Cubit; also the Bone so called.

457. Umbilicalis, belonging to the Navel; also the middle Region of the Abdomen or Belly.

458. Vomer, a Bone above the Palate, so called from its near resemblance to a Plough.

459. Ureters, the Pipes (in number two,) which convey the Urine from the Reins to the Bladder.

460. Urethra, the passage of the Seed and Urine, beginning at the Neck of the bladder, and ending at the Glans.

461. Urachus, commonly (but improperly) called the Piss-pipe: it is a little Chord or Ligament by

which the Piss-bladder is ryed to the Peritonæum.

462. Uterus, the Matrix or Womb, called also Hystera, and Metra.

463. Uvea, the second proper Tunicle of the Eye called Choroides, or Chorion-like.

464. Uvula, the process called Columna or Gargareon, hanging over the root of the Tongue.

465. Xiphoeidis, because it is Sword-like; it is the Sternum or Brest-bone, and is also called Mucronata, and Ensisformis.

466. Zygomaticus, a Muscle of the Lips, so called from

467. Zygoma, the Jugal, Yawk, or Throat-Bone, made up of the processes of two Bones.

Now unto the Eternal Fullness, the Almighty being (to whom I consecrate all the remainder of my days, imploring that the Angel of his presence may go along with me:) To the preserver of men, who in all dangers and times of Tryal has been with me, and through many troubled Waters, and cloudy Days has brought my Soul: To the Sacred Verity which comprehends all things, whose Greatness is beyond thought, whose Wisdom is unconceivable, whose Glory is immeasurable, who is the beginning from Eternity, and in whom all things shall be swallowed up: To the Great and Holy One, the incomprehensible being; to the Lamb who sits upon the Throne, who was Dead and is Alive, and Lives for evermore, the ineffable Word, the Prince of Life, the undoubted Victor of Death; and to the unerring Spirit of Truth, the boundless Fountain of Wisdom and Knowledg, be given all Honour, Glory, Praise and Thanks-giving, now and forever. Amen.

From my House at the Red
Balls in Salisbury-Court,
Fleet-streer, London:

SALMON.

FINIS.

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